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# CONTENTS OF VOLUME XI.

|                                              | PAGE        |
|----------------------------------------------|-------------|
| Title-page.....                              | <i>i</i>    |
| Committee of Publication.....                | <i>ii</i>   |
| Trustees, Officers and Committees.....       | <i>iii</i>  |
| Scientific Staff.....                        | <i>iv</i>   |
| Contents .....                               | <i>v</i>    |
| Preface to Volume.....                       | <i>vii</i>  |
| Numerical Summary of Part I.....Facing page  | <i>x</i>    |
| Numerical Summary of Part II.....            | <i>xi</i>   |
| Numerical Summary of Part III.....           | <i>xiii</i> |
| Numerical Summary of Part IV.....Facing page | <i>xiv</i>  |
| General Summary of the Catalogue.....        | <i>xv</i>   |

## PART I.

|                               |            |
|-------------------------------|------------|
| Title Page.....               | <i>i</i>   |
| Preface.....                  | <i>iii</i> |
| Abbreviations.....            | <i>v</i>   |
| Half-title .....              | <i>I</i>   |
| Cambrian Specimens.....       | <i>2</i>   |
| Lower Silurian Specimens..... | <i>14</i>  |
| Addendum et Corrigenda.....   | <i>72</i>  |

## PART II.

|                                                      |            |
|------------------------------------------------------|------------|
| Half-title.....                                      | <i>73</i>  |
| Addenda et Corrigenda to Part I.....                 | <i>74</i>  |
| Abbreviations.....                                   | <i>75</i>  |
| Upper Silurian Specimens.....                        | <i>76</i>  |
| Addenda et Corrigendum.....                          | <i>188</i> |
| <i>Cuneamya alveata</i> (new species described)..... | <i>188</i> |

## PART III.

|                                |            |
|--------------------------------|------------|
| Half-title.....                | <i>189</i> |
| Devonian Specimens.....        | <i>190</i> |
| Addenda et Corrigenda.....     | <i>350</i> |
| Abbreviations.....             | <i>354</i> |
| Note regarding localities..... | <i>356</i> |



## PART IV.

|                                    | PAGE |
|------------------------------------|------|
| Half-title.....                    | 357  |
| Lower Carboniferous Specimens..... | 358  |
| Coal Measure Specimens.....        | 412  |
| Cretaceous Specimens.....          | 416  |
| Tertiary Specimens.....            | 438  |
| Quaternary Specimens.....          | 462  |
| Addenda et Corrigenda.....         | 481  |
| Abbreviations.....                 | 485  |
| Index.....                         | 489  |











# NUMERICAL SUMMARY OF PART I. CAMBRIAN AND LOWER SILURIAN.

| ZOÖLOGICAL<br>SUBDIVISIONS. | NAMES.   |         |       |         |             |         | REFERENCES. |         |       |         | SPECIMENS. |         |       |         |
|-----------------------------|----------|---------|-------|---------|-------------|---------|-------------|---------|-------|---------|------------|---------|-------|---------|
|                             | Types.   |         |       |         | Fig'd Spec. |         |             |         |       |         |            |         |       |         |
|                             | Species. |         | Var.  |         | Species.    |         |             |         |       |         |            |         |       |         |
|                             | Camb.    | L. Sil. | Camb. | L. Sil. | Camb.       | L. Sil. | Camb.       | L. Sil. | Camb. | L. Sil. | Camb.      | L. Sil. | Camb. | L. Sil. |
| Thallogena.....             | I        | 12      | ..    | ..      | I           | I       | 2           | 16      | 2     | 48      | I          | 19      | I     | I       |
| Foraminifera ?.....         | ..       | 4       | ..    | ..      | ..          | I       | ..          | 9       | ...   | 15      | ...        | 7       | ..    | I       |
| Plethospongiæ.....          | ..       | 2       | ..    | I       | ..          | ..      | ..          | 3       | ...   | 9       | ...        | 6       | ..    | ...     |
| Actinozoa.....              | ..       | 7       | ..    | ..      | ..          | I       | ..          | 8       | ...   | 20      | ...        | 15      | ..    | 2       |
| Monticuliporoidea.....      | ..       | 2       | ..    | ..      | ..          | 2       | ..          | 8       | ...   | 25      | ...        | 2       | ..    | 14      |
| Hydrozoa.....               | I        | 26      | ..    | ..      | ..          | 5       | 5           | 59      | 15    | 202     | 2          | 65      | ..    | 23      |
| Asteroidea.....             | ..       | 2       | ..    | ..      | ..          | ..      | ..          | 2       | ...   | 3       | ...        | 2       | ..    | ...     |
| Crinoidea.....              | ..       | 13      | ..    | ..      | ..          | I       | ..          | 17      | ...   | 74      | ...        | 47      | ..    | 4       |
| Cystoidea.....              | ..       | 9       | ..    | ..      | ..          | I       | ..          | 13      | ...   | 15      | ...        | 14      | ..    | 4       |
| Polyzoa.....                | ..       | 12      | ..    | I       | ..          | ..      | ..          | 14      | ...   | 32      | ...        | 20      | ..    | ...     |
| Brachiopoda.....            | II       | 61      | ..    | ..      | 4           | 29      | 29          | 166     | 61    | 606     | 25         | 181     | 9     | 140     |
| Lamellibranchiata.....      | ..       | 46      | ..    | ..      | ..          | 12      | ..          | 94      | ...   | 185     | ...        | 123     | ..    | 34      |
| Gastropoda.....             | 3        | 82      | ..    | ..      | ..          | 25      | 3           | 126     | 3     | 294     | 3          | 158     | ..    | 44      |
| Pteropoda.....              | 3        | 9       | ..    | ..      | 2           | ..      | 9           | 10      | 10    | 18      | 6          | 16      | 3     | I       |
| Cephalopoda.....            | ..       | 74      | ..    | 7       | ..          | 14      | ..          | 117     | ...   | 312     | ...        | 171     | ..    | 30      |
| Annelida.....               | I        | I       | ..    | ..      | ..          | ..      | I           | I       | 2     | 3       | 2          | 2       | ..    | ...     |
| Ostracoda.....              | I        | 3       | ..    | ..      | ..          | ..      | I           | 5       | 2     | 11      | I          | 6       | ..    | 4       |
| Phyllocarida.....           | ..       | 2       | ..    | ..      | ..          | ..      | ..          | I       | ...   | 5       | ...        | 2       | ..    | ...     |
| Trilobita.....              | 34       | 25      | I     | ..      | 9           | 15      | 69          | 46      | 192   | 197     | 96         | 69      | 61    | 74      |
| Merostomata.....            | I        | ..      | ..    | ..      | ..          | ..      | 2           | ...     | 11    | ...     | 9          | ...     | ..    | ...     |
| Totals.....                 | 56       | 392     | I     | 9       | 16          | 107     | 121         | 715     | 298   | 2074    | 145        | 925     | 74    | 376     |

(To face page x.)







# NUMERICAL SUMMARY OF PART II.

## UPPER SILURIAN.

| ZOÖLOGICAL<br>SUBDIVISIONS. | NAMES.   |      |           |      | REFERENCES. |         | SPECIMENS. |          |
|-----------------------------|----------|------|-----------|------|-------------|---------|------------|----------|
|                             | Types.   |      | Fig'd Sp. |      | Page.       | Figure. | Type.      | Figured. |
|                             | Species. | Var. | Species.  | Var. |             |         |            |          |
| Thallogena.....             | 7        | 2    | ..        | ..   | 17          | 40      | 24         | 17       |
| Plethospongiæ .....         | 6        | 1    | 2         | ..   | 12          | 24      | 10         | 8        |
| Actinozoa.....              | 42       | 1    | 5         | ..   | 69          | 290     | 136        | 25       |
| Hydrozoa .....              | 6        | ..   | 1         | ..   | 19          | 55      | 17         | 6        |
| Monticuliporoidea..         | 3        | ..   | 1         | ..   | 9           | 27      | 5          | 5        |
| Crinoidea .....             | 55       | 1    | 7         | ..   | 101         | 357     | 174        | 31       |
| Cystoidea.....              | 17       | ..   | 2         | ..   | 26          | 75      | 28         | 17       |
| Asteroidea .....            | 1        | ..   | ..        | ..   | 1           | 2       | 1          | ...      |
| Polyzoa.....                | 90       | 3    | 1         | ..   | 144         | 457     | 219        | 8        |
| Brachiopoda.....            | 156      | 8    | 36        | ..   | 431         | 2260    | 720        | 311      |
| Lamellibranchiata..         | 59       | ..   | 5         | ..   | 74          | 159     | 117        | 15       |
| Gastropoda.....             | 92       | 2    | 8         | ..   | 123         | 228     | 195        | 30       |
| Pteropoda.....              | 6        | ..   | 1         | ..   | 8           | 28      | 16         | 1        |
| Cephalopoda .....           | 35       | ..   | 6         | ..   | 59          | 113     | 58         | 22       |
| Annelida.....               | 6        | 1    | 1         | ..   | 15          | 40      | 25         | 4        |
| Ostracoda.....              | 6        | 1    | 1         | ..   | 11          | 24      | 15         | 4        |
| Phyllocarida .....          | 7        | ..   | ..        | ..   | 8           | 26      | 25         | 1        |
| Trilobita.....              | 31       | 1    | 11        | ..   | 80          | 216     | 90         | 68       |
| Eurypterida.....            | 6        | 1    | 2         | ..   | 9           | 42      | 10         | 25       |
| Arachnida.....              | 1        | ..   | ..        | ..   | 1           | 6       | 1          | ...      |
| Incertæ sedis.....          | 3        | ..   | 2         | ..   | 9           | 13      | 5          | 7        |
| Miscellaneous.....          | ...      | ..   | ..        | ..   | 10          | 22      | ...        | 20       |
| Totals.....                 | 635      | 22   | 92        | ..   | 1236        | 4504    | 1791       | 625      |







# NUMERICAL SUMMARY OF PART III.

## DEVONIAN.

| ZOÖLOGICAL<br>SUBDIVISIONS. | NAMES.   |      |           |      | REFERENCES. |         | SPECIMENS. |          |
|-----------------------------|----------|------|-----------|------|-------------|---------|------------|----------|
|                             | Types.   |      | Fig'd Sp. |      | Page.       | Figure. | Type.      | Figured. |
|                             | Species. | Var. | Species.  | Var. |             |         |            |          |
| Plantæ.....                 | 11       | ..   | ..        | ..   | 19          | 18      | 15         | ..       |
| Plethospongiæ.....          | 5        | ..   | 1         | ..   | 11          | 10      | 5          | 1        |
| Actinozoa.....              | 20       | 3    | 11        | 1    | 53          | 138     | 60         | 29       |
| Hydrozoa.....               | 3        | ..   | ..        | ..   | 4           | ..      | 4          | ..       |
| Asteroidea.....             | 2        | ..   | 1         | ..   | 5           | 7       | 6          | 1        |
| Crinoidea.....              | 24       | ..   | 1         | ..   | 39          | 96      | 64         | 8        |
| Cystoidea.....              | 1        | ..   | ..        | ..   | 1           | 4       | 1          | ..       |
| Blastoidea.....             | 5        | ..   | ..        | ..   | 7           | 4       | 11         | ..       |
| Polyzoa.....                | 13       | ..   | 2         | ..   | 26          | 29      | 16         | 3        |
| Brachiopoda.....            | 208      | 11   | 53        | 2    | 1291        | 2407    | 698        | 331      |
| Lamellibranchiata..         | 188      | 5    | 60        | 1    | 1041        | 1356    | 443        | 239      |
| Gastropoda.....             | 87       | 7    | 12        | ..   | 407         | 750     | 218        | 44       |
| Pteropoda.....              | 9        | ..   | 1         | ..   | 24          | 39      | 13         | 2        |
| Cephalopoda.....            | 53       | 1    | 4         | ..   | 210         | 257     | 85         | 16       |
| Cirripedia.....             | 1        | ..   | ..        | ..   | 2           | 2       | 1          | ..       |
| Ostracoda.....              | 6        | ..   | 3         | ..   | 12          | 22      | 8          | 6        |
| Trilobita.....              | 26       | ..   | 9         | 1    | 167         | 287     | 51         | 36       |
| Pisces.....                 | 5        | ..   | 1         | ..   | 12          | 13      | 8          | 2        |
| Totals.....                 | 667      | 27   | 158       | 5    | 3329        | 5437    | 1707       | 717      |















SUMMARY OF PART IV.

LOWER CARBONIFEROUS TO QUATERNARY.

| ZOÖLOGICAL<br>SUBDIVISIONS. | NAMES.               |                |             |           |             |                      |                |             |           |             |                      |                |             |           |             |                      |                |             | REFERENCES. |             |                      |                |             |           |             |                      |                |             | SPECIMENS. |             |                      |                |             |           |             |                      |                |             |           |             |    |    |    |
|-----------------------------|----------------------|----------------|-------------|-----------|-------------|----------------------|----------------|-------------|-----------|-------------|----------------------|----------------|-------------|-----------|-------------|----------------------|----------------|-------------|-------------|-------------|----------------------|----------------|-------------|-----------|-------------|----------------------|----------------|-------------|------------|-------------|----------------------|----------------|-------------|-----------|-------------|----------------------|----------------|-------------|-----------|-------------|----|----|----|
|                             | Types.               |                |             |           |             |                      |                |             |           |             | Figured Specimens.   |                |             |           |             |                      |                |             | Page.       |             |                      |                |             | Figure.   |             |                      |                |             | Type.      |             |                      |                |             | Figured.  |             |                      |                |             |           |             |    |    |    |
|                             | Species.             |                |             |           |             | Varieties.           |                |             |           |             | Species.             |                |             |           | Varieties.  |                      |                |             | Page.       |             |                      |                |             | Figure.   |             |                      |                |             | Type.      |             |                      |                |             | Figured.  |             |                      |                |             |           |             |    |    |    |
|                             | Lower Carboniferous. | Coal Measures. | Cretaceous. | Tertiary. | Quaternary. | Lower Carboniferous. | Coal Measures. | Cretaceous. | Tertiary. | Quaternary. | Lower Carboniferous. | Coal Measures. | Cretaceous. | Tertiary. | Quaternary. | Lower Carboniferous. | Coal Measures. | Cretaceous. | Tertiary.   | Quaternary. | Lower Carboniferous. | Coal Measures. | Cretaceous. | Tertiary. | Quaternary. | Lower Carboniferous. | Coal Measures. | Cretaceous. | Tertiary.  | Quaternary. | Lower Carboniferous. | Coal Measures. | Cretaceous. | Tertiary. | Quaternary. | Lower Carboniferous. | Coal Measures. | Cretaceous. | Tertiary. | Quaternary. |    |    |    |
| Cryptogamia.....            | 2                    | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..          | ..          | 2                    | ..             | ..          | ..        | ..          | ..                   | 2              | ..          | ..         | ..          | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | .. | .. | .. |
| Angiospermæ.....            | ..                   | ..             | 3           | 19        | ..          | ..                   | ..             | ..          | 2         | ..          | ..                   | ..             | 1           | 3         | ..          | ..                   | ..             | ..          | ..          | ..          | ..                   | ..             | 5           | 91        | ..          | ..                   | ..             | ..          | 7          | 71          | ..                   | ..             | ..          | 5         | 47          | ..                   | ..             | ..          | 3         | 9           | .. | .. |    |
| Rhizopoda.....              | 1                    | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..          | ..          | 3                    | ..             | ..          | ..        | ..          | ..                   | 90             | ..          | ..         | ..          | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | .. | .. | .. |
| Plethospongiæ.....          | 9                    | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..          | ..          | 38                   | ..             | ..          | ..        | ..          | ..                   | 58             | ..          | ..         | ..          | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | .. | .. | .. |
| Actinozoa.....              | 5                    | ..             | 2           | 1         | 1           | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | 1           | 2         | ..          | ..                   | ..             | ..          | ..          | ..          | 9                    | ..             | 3           | 1         | 3           | 6                    | ..             | 15          | 2          | 5           | ..                   | 14             | ..          | 1         | ..          | ..                   | ..             | ..          | 1         | 2           | .. | .. |    |
| Crinoidea.....              | 48                   | ..             | ..          | ..        | ..          | 2                    | ..             | ..          | ..        | ..          | 4                    | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..          | ..          | 111                  | ..             | ..          | ..        | ..          | 101                  | ..             | ..          | ..         | ..          | ..                   | ..             | 7           | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | .. | .. |    |
| Blastoidea.....             | 7                    | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | 2                    | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..          | ..          | 18                   | ..             | ..          | ..        | ..          | 25                   | ..             | ..          | ..         | ..          | ..                   | 39             | ..          | ..        | ..          | ..                   | 2              | ..          | ..        | ..          | .. | .. |    |
| Echinoidea.....             | 3                    | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | 1                    | ..             | ..          | 3         | ..          | ..                   | ..             | ..          | ..          | 1           | 5                    | ..             | ..          | 3         | 1           | 12                   | ..             | ..          | 10         | 3           | 5                    | ..             | ..          | ..        | ..          | 2                    | ..             | ..          | 3         | 2           | .. | .. |    |
| Polyzoa.....                | 7                    | ..             | ..          | 4         | ..          | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | 4           | 1         | ..          | ..                   | ..             | ..          | ..          | ..          | 8                    | ..             | ..          | 8         | 1           | 8                    | ..             | ..          | 15         | 1           | 14                   | ..             | ..          | 4         | ..          | ..                   | ..             | 5           | 1         | ..          | .. |    |    |
| Brachiopoda.....            | 58                   | 2              | 1           | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | 19                   | 6              | 3           | 2         | ..          | ..                   | ..             | 2           | ..          | ..          | 139                  | 23             | 6           | 3         | ..          | 328                  | 47             | 26          | 6          | ..          | 330                  | 1              | 1           | ..        | ..          | 45                   | 12             | 8           | 3         | ..          | .. |    |    |
| Lamellibranchiata.....      | 39                   | 3              | 61          | 17        | 4           | ..                   | ..             | 2           | 1         | 1           | 10                   | 1              | 15          | 29        | 39          | ..                   | ..             | ..          | 1           | 2           | 103                  | 5              | 84          | 55        | 48          | 235                  | 13             | 190         | 101        | 59          | 165                  | 5              | 108         | 24        | 6           | 33                   | 3              | 20          | 44        | 43          | .. | .. |    |
| Gastropoda.....             | 41                   | 4              | 52          | 34        | 9           | 1                    | ..             | 1           | ..        | ..          | 1                    | 5              | 10          | 22        | 24          | ..                   | ..             | ..          | 1           | ..          | 117                  | 10             | 62          | 63        | 33          | 126                  | 21             | 133         | 90         | 51          | 417                  | 4              | 69          | 35        | 11          | 4                    | 6              | 8           | 38        | 24          | .. | .. |    |
| Pteropoda.....              | 1                    | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..          | ..          | 3                    | ..             | ..          | ..        | ..          | 2                    | ..             | ..          | ..         | ..          | 3                    | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | .. | .. | .. |
| Cephalopoda.....            | 9                    | 1              | 6           | 1         | ..          | 1                    | ..             | 1           | ..        | ..          | 2                    | ..             | 5           | ..        | ..          | ..                   | ..             | ..          | ..          | ..          | 27                   | 1              | 13          | 1         | ..          | 81                   | 6              | 49          | 2          | ..          | 21                   | 1              | 10          | 1         | ..          | 5                    | ..             | 16          | ..        | ..          | .. |    |    |
| Annelida.....               | 2                    | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | ..          | ..          | 6                    | ..             | ..          | ..        | ..          | 4                    | ..             | 2           | ..         | ..          | 18                   | ..             | ..          | ..        | ..          | ..                   | 2              | ..          | ..        | ..          | .. | .. |    |
| Crustacea.....              | 2                    | 1              | 1           | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | 1                    | 1              | ..          | ..        | 1           | ..                   | ..             | ..          | ..          | ..          | 6                    | 4              | 1           | ..        | 3           | 11                   | 1              | 2           | ..         | 4           | 46                   | 1              | 1           | ..        | ..          | 2                    | 1              | ..          | ..        | 3           | .. |    |    |
| Pisces.....                 | ..                   | ..             | ..          | 1         | 2           | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | 2         | ..          | ..                   | ..             | ..          | ..          | ..          | ..                   | ..             | ..          | 1         | 4           | ..                   | ..             | ..          | 5          | 11          | ..                   | ..             | ..          | 1         | 4           | ..                   | ..             | ..          | ..        | ..          | 3  | .. |    |
| Reptilia.....               | ..                   | ..             | 1           | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | ..          | 1         | ..          | ..                   | ..             | ..          | ..          | ..          | ..                   | ..             | 2           | ..        | 2           | ..                   | ..             | 4           | ..         | 4           | ..                   | ..             | 1           | ..        | ..          | ..                   | ..             | ..          | ..        | ..          | 5  | .. |    |
| Mammalia.....               | ..                   | ..             | ..          | 2         | 5           | ..                   | ..             | ..          | ..        | ..          | ..                   | ..             | 1           | 11        | ..          | ..                   | ..             | ..          | ..          | ..          | ..                   | ..             | ..          | 4         | 21          | ..                   | ..             | ..          | 7          | 44          | ..                   | ..             | ..          | 2         | 11          | ..                   | ..             | ..          | 1         | 21          | .. | .. |    |
| Totals.....                 | 234                  | 11             | 127         | 79        | 21          | 4                    | ..             | 4           | 3         | 1           | 40                   | 13             | 35          | 66        | 79          | ..                   | ..             | 2           | 2           | 3           | 595                  | 43             | 176         | 230       | 116         | 1004                 | 88             | 428         | 309        | 182         | 1230                 | 12             | 209         | 114       | 33          | 100                  | 22             | 57          | 104       | 104         | .. | .. |    |

(To face page *xiv*.)







GENERAL SUMMARY OF THE CATALOGUE.

| PARTS.      | TYPES.   |            |            | FIG'D SPECIMENS. |            |            | REFERENCES. |         |
|-------------|----------|------------|------------|------------------|------------|------------|-------------|---------|
|             | Species. | Varieties. | Specimens. | Species.         | Varieties. | Specimens. | Page.       | Figure. |
| I .....     | 448      | 10         | 1070       | 16               | 107        | 450        | 836         | 2372    |
| II .....    | 635      | 22         | 1791       | 92               | 0          | 625        | 1236        | 4504    |
| III .....   | 667      | 27         | 1707       | 158              | 5          | 717        | 3329        | 5437    |
| IV.....     | 472      | 12         | 1598       | 233              | 7          | 387        | 1160        | 2011    |
| Totals..... | 2222     | 71         | 6166       | 499              | 119        | 2179       | 6561        | 14324   |







BULLETIN  
OF THE  
AMERICAN MUSEUM OF NATURAL  
HISTORY.

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*Volume XI, Part I, 1898.*

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CATALOGUE OF THE TYPES AND FIGURED SPECIMENS  
IN THE PALÆONTOLOGICAL COLLECTION OF THE  
GEOLOGICAL DEPARTMENT, AMERICAN  
MUSEUM OF NATURAL HISTORY.

By R. P. WHITFIELD, assisted by E. O. HOVEY.

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*July 22, 1898.*







## PREFACE.

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This Catalogue is intended to embrace all the type and figured specimens in the Palæontological Collection of the Geological Department of the American Museum of Natural History. The term 'type,' as employed herein, is applied to the specimens which have been used in the original description of a species, whether illustrated or not, and in the further elucidation of the species by the same author. A 'figured specimen' is one which has been identified with the name by a different author from the one who described the species, and which has been illustrated by him in the work to which reference is given. A 'generic type' may be a specific type also, or only a figured specimen. The Catalogue is one of individuals, and therefore does not pretend to give the bibliography of the species, but each entry gives the history of a particular specimen or set of specimens. In many instances there are other individuals in the type series than those which were figured, but these have not been entered separately.

In the tabulation the first column indicates the minor geological subdivision to which the specimen or set of specimens belongs; the second, the number which it bears in the Museum catalogue; the third, a statement as to whether the specimen is a type or only a figured specimen. The fourth column gives the generic and specific names with the author of each. In every instance the person whose name stands at the right hand side of this column is the author of the publication cited on the same line. In the case of the 'figured specimens' the name of the author of the species is placed in parenthesis. When a specimen stands under a different generic or specific name from the one under which it was first published, the original name is put in italics in its proper place in this column, and the revised name will be found in the



column of remarks. The complete history of the specimen or set of specimens will be found under the revised name. In some instances the name has been changed more than once, but such changes are noted only as far as they pertain to the particular specimen or set of specimens in question. A synonymous generic name is indicated in this column by italics. The next five columns contain the references to places of publication by name of work, volume or year of publication, page, plate and figure. If there is but one figure of a specimen cited, an abbreviated statement is inserted, when practicable and desirable, to show what view was used. All the references are grouped together in chronological order, except when the specific name has been changed. In case of such change, the first reference is to the place where the new name was first applied, after which the chronological order is followed, as elsewhere. No copied figures are noted. The tenth column gives localities and the eleventh contains remarks. In the last note is made of changes which have been made in the reference of the specimen to genus or species, and there is a brief statement as to the character of the specimen or specimens and their condition.

The order of arrangement is primarily stratigraphical, as far as the great geological subdivisions, Cambrian, Lower Silurian, etc., are concerned, but under these heads the arrangement is partly zoölogical and partly alphabetical. Plants are placed first, and then the animals are put in ascending order under subkingdoms and classes. Further classification has not usually been considered advisable, genera and species being arranged in strictly alphabetical sequence.

In Volumes I and II of the Palæontology of New York, the terms dorsal and ventral as applied to the valves of Brachiopods are used in the opposite sense from that now used. In this Catalogue the prevailing usage is followed.



# ABBREVIATIONS.

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## AUTHORS' NAMES.

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|                     |                               |
|---------------------|-------------------------------|
| B. & S.....         | Billings & Salter.            |
| BILL .....          | E. Billings.                  |
| BLAINV.....         | H. M. D. de Blainville.       |
| CON.....            | T. A. Conrad.                 |
| D'A. & V.....       | d'Archiac & de Verneuil.      |
| DEFR.....           | Defrance.                     |
| D'ORB .....         | Alcide d'Orbigny.             |
| EDW .....           | Milne-Edwards.                |
| EICHW.....          | E. von Eichwald.              |
| FISCH.....          | Fischer von Waldheim.         |
| FR .....            | F. Frech.                     |
| GOLDF.....          | E. Goldfuss.                  |
| GRN. ....           | J. Green.                     |
| H.....              | James Hall.                   |
| H. & C.....         | Hall & Clarke.                |
| H. & S.....         | Hall & Simpson.               |
| H. & W.....         | Hall & Whitfield.             |
| LAM .....           | J. P. B. A. de M. de Lamarck. |
| LAPW.....           | C. Lapworth.                  |
| LINN .....          | Linné.                        |
| M. & W.....         | Meek & Worthen.               |
| MILNE-EDW.....      | Milne-Edwards.                |
| NICH.....           | H. Alleyne Nicholson.         |
| RAF .....           | C. S. Rafinesque.             |
| ROEM.....           | Ferd. Roemer.                 |
| SOW-... ..          | J. Sowerby.                   |
| VAN, or VANUX ..... | Lardner Vanuxem.              |
| VERN .....          | E. de Verneuil.               |
| W.....              | R. P. Whitfield.              |
| W. & S.....         | Wachsmuth & Springer.         |
| WAHL.....           | Wahlenberg.                   |
| WHITE .....         | R. P. Whitfield.              |



## ABBREVIATIONS.

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### LIST OF WORKS CITED.

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CATALOGUE OF TYPES AND FIGURED  
SPECIMENS.

Cambrian. Kingdom PLANTÆ. Subkingdom

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                    | REFERENCE. |       |      |       |       |
|---------------|----------|-------------------|---------------------------------------------------------------|------------|-------|------|-------|-------|
|               |          |                   |                                                               | Work.      | Vol.  | P.   | Pl.   | Figs. |
| L. C. ?       | 200      | Fig'd.            | <b>Buthotrephis</b> Hall.<br>flexuosa ( <i>Emmons</i> ) Hall. | Pal. N. Y. | I     | 263  | 69A   | I     |
|               |          |                   | <b>Fucoides</b> Brongniart.<br>duplex .....                   | .....      | ..... | .... | ..... | ..... |
| U. C.         | 355      | Type.             | <b>Palæophycus</b> Hall.<br>duplex ..... Hall.                | Lake Sup.  | 2     | 226  | A23   | I     |

Kingdom ANIMALIA. Subkingdom

|                   |       |                      |                                 |             |        |       |        |         |
|-------------------|-------|----------------------|---------------------------------|-------------|--------|-------|--------|---------|
| U. C.             | 289   | Gen. and<br>Sp.Type. | <b>Dendrograptus</b> Hall.      |             |        |       |        |         |
|                   |       |                      | Hallianus.... . <i>Prout.</i>   | Am. J. Sci. | II, II | 189   | p. 190 | 1c-f, 2 |
|                   |       |                      | <i>Hall.</i>                    | Geol. Wis.  | I      | 21    | ....   | 1a-c    |
|                   |       |                      | "                               | N. Y. S. M. | 16     | 124   | ....   | 1a-c    |
|                   |       |                      | "                               | Can. O. R.  | Dec.2  | 127   | ....   | 1a-c    |
|                   |       |                      | "                               | N. Y. S. M. | 20     | 177   | ....   | 10      |
|                   |       |                      | <b>Graptolithus</b> Linn.       |             |        |       |        |         |
| <i>Hallianus.</i> | ..... | .....                | .....                           | .....       | .....  |       |        |         |
|                   |       |                      | <b>G. (Dendrograptus)</b> Hall. |             |        |       |        |         |
|                   |       |                      | <i>Hallianus</i> .....          | .....       | .....  | ..... | .....  | .....   |

MOLLUSCOIDEA.

|       |                 |                   |                                                             |              |          |      |       |          |
|-------|-----------------|-------------------|-------------------------------------------------------------|--------------|----------|------|-------|----------|
| L. C. | 208             | Type.             | <b>Billingsella</b> Hall.                                   |              |          |      |       |          |
| U. C. | $\frac{300}{2}$ | Gen. and Sp. Type | orientalis . . . . <i>Whitfield.</i>                        | A. M. N. H.  | I        | I44  | I4    | 6        |
|       |                 |                   | pepina . . . . . <i>Hall.</i>                               | N. Y. S. M.  | I6       | I34  | 6     | 23-26    |
|       |                 |                   | "                                                           | St. G. N. Y. | 2        | .... | 37    | I6-I9    |
|       |                 |                   | <i>H. &amp; C.</i>                                          | Pal. N. Y.   | 8, pt. I | 230  | 7     | I6-I9    |
| "     | $\frac{300}{3}$ | " "               | " . . . . . <i>Hall.</i>                                    | N. Y. S. M.  | I6       | I34  | 6     | 27       |
|       |                 |                   | <b>Dicellomus</b> Hall.                                     |              |          |      |       |          |
|       |                 |                   | <i>crassus</i> . . . . .                                    |              |          |      |       |          |
|       |                 |                   | <i>politus</i> . . . . .                                    |              |          |      |       |          |
| U. C. | 289a            | Type.             | <b>Discina</b> Lamarck.                                     |              |          |      |       |          |
|       |                 |                   | ? inutilis . . . . . <i>Hall.</i>                           | N. Y. S. M.  | I6       | I30  | 6     | II       |
|       |                 |                   | <b>Discinella</b> Hall. . . . .                             |              |          |      |       |          |
| U. C. | $\frac{293}{2}$ | Fig'd.            | <b>Lingula</b> Bruguière.                                   |              |          |      |       |          |
|       |                 |                   | <del>ampla</del> ampla ( <i>Owen</i> ) . . . . <i>Hall.</i> | Geol. Wis.   | I86I     | 24   | ....  |          |
|       |                 |                   | "                                                           | " "          | I        | 2I   | Ct. 2 | 4, ext.? |
|       |                 |                   | "                                                           | N. Y. S. M.  | I6       | I25  | 6     | IO "     |
|       |                 |                   | <i>antiqua</i> . . . . .                                    |              |          |      |       |          |
|       |                 |                   | <i>aurora</i> . . . . .                                     |              |          |      |       |          |
|       |                 |                   | " , var. . . . .                                            |              |          |      |       |          |
| U. C. | $\frac{290}{2}$ | Type.             | mosia . . . . . <i>Hall.</i>                                | N. Y. S. M.  | I6       | I26  | 6     | I-3      |
| "     | $\frac{290}{1}$ | "                 | " . . . . . "                                               | " "          | I6       | I26  | 6     | 3a, ext. |
|       |                 |                   | <i>pinniiformis</i> . . . . .                               |              |          |      |       |          |
|       |                 |                   | <i>polita</i> . . . . .                                     |              |          |      |       |          |
|       |                 |                   | <i>prima</i> . . . . .                                      |              |          |      |       |          |



CRYPTOGAMIA.

Class THALLOGENA.

| LOCALITY.                  | REMARKS.                                                        |
|----------------------------|-----------------------------------------------------------------|
| Greenwich, N. Y.           | In slate. Referred to Hudson River group in the volume.         |
| .....                      | See <i>Palæophycus</i> .                                        |
| Pictured Rocks,<br>L. Sup. | As <i>Fucoides</i> ? Slab bearing several stems. Not described. |

CŒLEENTERATA.

Class HYDROZOA.

|                     |                                                             |
|---------------------|-------------------------------------------------------------|
| .....               | As type of <i>Graptolithus Hallianus</i> .                  |
| .....               | " <i>G. (Dendrograptus)</i> .                               |
| .....               | Made generic type.                                          |
| Osceola Mills, Wis. | A large stipe with branchlets; fronds imbedded. Two blocks. |
| .....               | See <i>Dendrograptus</i> .                                  |
| .....               | " "                                                         |

Class BRACHIOPODA.

|                                        |                                                                                                             |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Georgia, Vt.                           | As <i>Orthisina</i> . Interior imprint of ventral valve.                                                    |
| .....                                  | " <i>Orthis</i> .                                                                                           |
| 3 miles above Reed's<br>Landing, Minn. | " <i>Orthis</i> ? ( <i>Orthisina</i> ?)                                                                     |
| Kickapoo, Wis.                         | Made generic type. Exterior imprint of a dorsal and a ventral valve and interior imprint of the two valves. |
| .....                                  | As <i>Orthis</i> . Interior imprint ventral valve.                                                          |
| .....                                  | = <i>Obolella</i> .                                                                                         |
| .....                                  | See "                                                                                                       |
| .....                                  | " "                                                                                                         |
| Mazomanie, Wis.                        | Imprint in sandstone retaining some shell.                                                                  |
| .....                                  | See <i>Hyalithellus micans</i> .                                                                            |
| .....                                  | As type of <i>L. aurora</i> Hall.                                                                           |
| .....                                  | " " "                                                                                                       |
| Mazomanie, Wis.                        | Ventral? valve, imbedded.                                                                                   |
| .....                                  | See <i>Lingulepis pinniiformis</i> .                                                                        |
| .....                                  | " <i>Lingula ampla</i> and <i>Lingulella aurora</i> .                                                       |
| .....                                  | " <i>Lingulella Stoneana</i> .                                                                              |
| Mazomanie, Wis.                        | Two imprints and an imbedded individual retaining some shell.                                               |
| Stillwater, Minn.                      | Imbedded individual retaining shell.                                                                        |
| .....                                  | See <i>Lingulepis</i> .                                                                                     |
| .....                                  | " <i>Obolella</i> .                                                                                         |
| .....                                  | " " and <i>Lingulepis pinniiformis</i> .                                                                    |

MOLLUSCOIDEA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.     | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                        | REFERENCE.  |          |       |       |                      |
|------------------|-----------------|----------------------|-----------------------------------------------------------------------------------|-------------|----------|-------|-------|----------------------|
|                  |                 |                      |                                                                                   | Work.       | Vol.     | P.    | Pl.   | Figs.                |
| U. C.            | 296             | Fig'd.               | <b>Lingula</b> Bruguière— <i>Cont.</i><br>prima ( <i>Con.</i> )..... <i>Hall.</i> | Lake Sup.   | 2        | 204   | 23    | 1a                   |
| "                | $\frac{291}{1}$ | Type.                | winona..... <i>Hall.</i>                                                          | N. Y. S. M. | 16       | 126   | 6     | 9, <i>ext.</i>       |
| "                | 292             | "                    | <b>Lingulella</b> Salter.<br>aurora..... <i>Hall.</i>                             | " "         | 16       | 126   | 6     | 4, 5                 |
| "                | "               | "                    | " ..... <i>H. &amp; C.</i>                                                        | Pal. N. Y.  | 8, pt. 1 | ....  | 2     | 12, 13               |
| L. C. ?          | 205             | "                    | cælata..... <i>Hall.</i>                                                          | Pal. N. Y.  | 1        | 290   | 79    | 9a-c                 |
| U. C.            | 294             | "                    | Stoneana ..... <i>Whitfield.</i>                                                  | Geol. Wis.  | 4        | 344   |       |                      |
|                  |                 |                      | <i>Hall.</i>                                                                      | N. Y. S. M. | 16       | 127   | 6     | 6-8                  |
|                  |                 |                      | <i>H. &amp; C.</i>                                                                | Pal. N. Y.  | 8, pt. 1 | ....  | 2     | 9-11                 |
| "                | 274             | "                    | <b>Lingulepis</b> Hall.<br>minima..... <i>Whitfield.</i>                          | A. M. N. H. | 1        | 141   | 14    | 1, 2, <i>enl.</i>    |
| "                | $\frac{295}{1}$ | Fig'd.               | pinniformis ( <i>Owen</i> )... <i>H.</i>                                          | Lake Sup.   | 2        | 204   | 23    | 1e, <i>ext.</i>      |
| "                | "               | "                    | " " "                                                                             | " "         | 2        | 204   | 23    | 2a, b                |
| "                | "               | Gen. T.              | " " "                                                                             | Geol. Wis.  | 1        | 21    | Ct. 2 | 3, <i>ext. v. v.</i> |
|                  |                 |                      | " " "                                                                             | N. Y. S. M. | 16       | 129   | 6     | 13, 14               |
| L. C.            | 209             | Type.                | <b>Obolella</b> Billings.<br>crassa..... <i>Hall.</i>                             | Pal. N. Y.  | 1        | 290   | 78    | 8a, <i>ext.</i>      |
|                  |                 |                      | " " "                                                                             | N. Y. S. M. | 23       | 246   | 13    | 6, <i>ext.</i> X 2   |
| "                | "               | "                    | <i>H. &amp; C.</i>                                                                | Pal. N. Y.  | 8, pt. 1 | 67    | 2     | 31, 32               |
| "                | "               | "                    | " ..... <i>Hall.</i>                                                              | " "         | 1        | 292   | 80    | 3a, b.               |
|                  |                 |                      | <i>H. &amp; C.</i>                                                                | " "         | 8, pt. 1 | 67    | 2     | 33                   |
| U. C.            | $\frac{298}{1}$ | "                    | polita..... <i>Hall.</i>                                                          | Geol. Wis.  | 1861     | 24    | ....  | ....                 |
|                  |                 |                      | " " "                                                                             | " "         | 1        | 21    | Ct. 2 | 1, <i>ext.</i>       |
|                  |                 |                      | " " "                                                                             | N. Y. S. M. | 16       | 133   | 6     | 19-21                |
|                  |                 |                      | <i>H. &amp; C.</i>                                                                | Pal. N. Y.  | 8, pt. 1 | 67    | 2     | 40, 41               |
| "                | 276             | Fig'd.               | prima ( <i>Con.</i> )..... <i>Hall.</i>                                           | " "         | 1        | 3     | 1     | 2, <i>ext.</i>       |
|                  |                 |                      | <i>Whitfield.</i>                                                                 | A. M. N. H. | 1        | 142   | 14    | 3-5                  |
|                  |                 |                      | <b>Orthis</b> Dalman.<br><i>pepina</i> .....                                      | .....       | .....    | ..... | ..... | .....                |
|                  |                 |                      | <b>Orthisina</b> d'Orbigny.<br><i>orientalis</i> .....                            | .....       | .....    | ..... | ..... | .....                |

Subkingdom MOLLUSCA.

|  |  |  |                                                    |       |       |       |       |       |
|--|--|--|----------------------------------------------------|-------|-------|-------|-------|-------|
|  |  |  | <b>Avicula</b> Klein.<br><i>? desquamata</i> ..... | ..... | ..... | ..... | ..... | ..... |
|--|--|--|----------------------------------------------------|-------|-------|-------|-------|-------|

Class GASTROPODA.

|       |     |       |                                                                      |             |       |       |       |                  |
|-------|-----|-------|----------------------------------------------------------------------|-------------|-------|-------|-------|------------------|
| U. C. | 304 | Type. | <b>Euomphalus</b> Sowerby.<br><i>? vaticinus</i> ..... <i>Hall.</i>  | N. Y. S. M. | 16    | 136   | 6     | 29, <i>top.</i>  |
| "     | 305 | "     | <b>Maclurea</b> Le Sueur.<br><i>Wadsworthi</i> ... <i>Whitfield.</i> | A. M. N. H. | 1     | 153   | 14    | 16, <i>base.</i> |
|       |     |       | <b>Metoptoma</b> Phillips.<br><i>rugosa</i> .....                    | .....       | ..... | ..... | ..... | .....            |
| U. C. | 303 | Type. | <b>Platyceras</b> Conrad.<br><i>primordiale</i> ..... <i>Hall.</i>   | N. Y. S. M. | 16    | 136   | 6     | 28, <i>side.</i> |



Class BRACHIOPODA—Continued.

| LOCALITY.                                  | REMARKS.                                                                                                                                                                |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tequamenon Bay,<br>L. Sup.<br>Lansing, Ia. | Exfoliated valve, imbedded. Is the original of figure and description and is a linguloid shell.<br>Valve, imbedded.                                                     |
| Mazomanie, Wis.                            | As <i>Lingula</i> . Two valves almost in opposition, and a ventral? valve. Imprints.                                                                                    |
| “ “                                        | Two imprints showing dors. valve and card. area. Degree of enlargement incorrectly stated in explanation of plate (×2).                                                 |
| Troy, N. Y.                                | As <i>Orbicula</i> . Referred to Hudson River group in volume.                                                                                                          |
| .....                                      | As <i>Lingula aurora</i> , var., Hall.                                                                                                                                  |
| Mazomanie, Wis.                            | Ext. impr. of one valve and int. impr. of the other on same block.                                                                                                      |
| Near Keeseville, N.Y.                      | A dorsal and a ventral valve, imbedded. From Au Sable Chasm.                                                                                                            |
| St. Croix Falls, Minn.                     | As <i>Lingula prima</i> Con. Dorsal valve, imbedded.                                                                                                                    |
| “ “ “                                      | “ “ <i>antiqua</i> Emmons. Two ventral valves, imbedded.                                                                                                                |
| .....                                      | “ “                                                                                                                                                                     |
| St. Croix Falls, Minn.                     | Made generic type. Two opposite valves, imbedded.                                                                                                                       |
| .....                                      | As <i>Orbicula</i> ? and referred to Hudson River group.                                                                                                                |
| .....                                      | “ <i>Dicellomus</i> .                                                                                                                                                   |
| Troy, N. Y.                                | Exfoliated valve, imbedded.                                                                                                                                             |
| .....                                      | As type of <i>Avicula</i> ? <i>desquamata</i> and referred to Hudson Riv. grp.                                                                                          |
| Troy, N. Y.                                | Very perfect valve, imbedded.                                                                                                                                           |
| .....                                      | As <i>Lingula</i> .                                                                                                                                                     |
| .....                                      | “ “                                                                                                                                                                     |
| .....                                      | “ <i>Obolella</i> ?                                                                                                                                                     |
| Trempealeau, Wis.                          | Three separated valves, imbedded, and an imprint of interior of ventral valve. This species was made the type of <i>Dicellomus</i> Hall, 23d rept. N. Y. S. M., p. 246. |
| .....                                      | As <i>Lingula</i> .                                                                                                                                                     |
| Au Sable Chasm, N.Y.                       | A group and a very perfect single individual, imbedded.                                                                                                                 |
| .....                                      | See <i>Billingsella</i> .                                                                                                                                               |
| .....                                      | “ “                                                                                                                                                                     |

Class LAMELLIBRANCHIATA.

|                      |                                     |
|----------------------|-------------------------------------|
| .....                | See <i>Obolella crassa</i> .        |
| .....                |                                     |
| La Grange Mt., Minn. | Cast in sandstone.                  |
| Mazomanie, Wis.      | Cast showing flat side, and matrix. |
| .....                | See <i>Stenotheca</i> .             |
| Trempealeau, Wis.    | Internal? cast, imbedded.           |

| Class PTEROPODA. |                 |                   |                                                                            |             |       |       |       |           |
|------------------|-----------------|-------------------|----------------------------------------------------------------------------|-------------|-------|-------|-------|-----------|
| Geol. Subdiv.    | Cat. No.        | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                 | REFERENCE.  |       |       |       |           |
|                  |                 |                   |                                                                            | Work.       | Vol.  | P.    | Pl.   | Figs.     |
| L. C.            | 213             | .....             | <b>Hyolithellus</b> Billings.<br>micans ( <i>Bill.</i> )..... <i>Hall.</i> | N. Y. S. M. | 23    | 246   | ....  | .....     |
| U. C.            | 307             | Type.             | Murchisoni..... <i>Hall.</i>                                               | Geol. Wis.  | 1861  | 48    | ....  | .....     |
|                  |                 |                   | “                                                                          | “ “         | I     | 21    | Ct. 2 | 6         |
|                  |                 |                   | “                                                                          | N. Y. S. M. | 16    | 136*  | 6     | 32, side. |
| L. C.            | 215             | Fig'd.            | <b>Hyolithes</b> Eichwald.<br>americanus ( <i>Bill.</i> ).. <i>Hall.</i>   | Pal. N. Y.  | I     | 313   | 87    | 1a, c     |
| U. C.            | $\frac{306}{1}$ | Type.             | primordialis..... <i>Hall.</i>                                             | Geol. Wis.  | 1861  | 48    | ....  | .....     |
|                  |                 |                   | “                                                                          | “ “         | I     | 21    | Ct. 2 | 5a, b     |
|                  |                 |                   | “                                                                          | N. Y. S. M. | 16    | 135*  | 6     | 30, 31    |
| L. C.            | 212             | “                 | <b>Stenotheca</b> Salter.<br>rugosa..... <i>Hall.</i>                      | Pal. N. Y.  | I     | 306   | 83    | 6a, c     |
|                  |                 |                   | <i>Theca</i> Sowerby.....                                                  | .....       | ..... | ..... | ..... | .....     |
|                  |                 |                   | <i>primordialis</i> .....                                                  | .....       | ..... | ..... | ..... | .....     |
|                  |                 |                   | ? <i>triangularis</i> .....                                                | .....       | ..... | ..... | ..... | .....     |

Subkingdom VERMES.

|  |  |  |                                                         |       |       |       |       |       |
|--|--|--|---------------------------------------------------------|-------|-------|-------|-------|-------|
|  |  |  | <b>Serpulites</b> Murchison.<br><i>Murchisoni</i> ..... | ..... | ..... | ..... | ..... | ..... |
|--|--|--|---------------------------------------------------------|-------|-------|-------|-------|-------|

WORM-BURROWS.

|       |                 |       |                                                          |            |   |   |   |    |
|-------|-----------------|-------|----------------------------------------------------------|------------|---|---|---|----|
| L. C. | $\frac{273}{3}$ | Type. | <b>Scolithus</b> Haldeman.<br>linearis..... <i>Hall.</i> | Pal. N. Y. | I | 2 | I | 1a |
| “     | $\frac{273}{1}$ | “     | “.....“                                                  | “ “        | I | 2 | I | 1c |

Subkingdom ARTHROPODA.

Class

|       |                 |       |                                                              |             |   |     |    |        |
|-------|-----------------|-------|--------------------------------------------------------------|-------------|---|-----|----|--------|
| L. C. | $\frac{239}{1}$ | Type. | <b>Nothozoë</b> Barrande.<br>vermontana... <i>Whitfield.</i> | A. M. N. H. | I | 144 | 14 | 14, 15 |
|-------|-----------------|-------|--------------------------------------------------------------|-------------|---|-----|----|--------|

Order TRILOBITA.

|       |     |        |                                                                         |             |       |       |       |               |
|-------|-----|--------|-------------------------------------------------------------------------|-------------|-------|-------|-------|---------------|
| U. C. | 310 | Type.  | <b>Agnostus</b> Brongniart.<br>disparilis..... <i>Hall.</i>             | N. Y. S. M. | 16    | 179   | 10    | 25-27         |
| “     | 311 | “      | josepha..... <i>Hall.</i>                                               | “ “         | 16    | 178   | 6     | 54, 55        |
| U. C. | 309 | Type.  | <i>lobatus</i> .....                                                    | .....       | ..... | ..... | ..... | .....         |
|       |     |        | parilis..... <i>Hall.</i>                                               | “ “         | 16    | 179   | 10    | 23, 24        |
| “     | 349 | “      | <b>Amphion</b> Pander.<br>? matutinus..... <i>Hall.</i>                 | “ “         | 16    | 222   | 5a    | 6, glab. x 4  |
|       |     |        | <b>Angelina</b> Salter.<br><i>Hitchcocki</i> .....                      | .....       | ..... | ..... | ..... | .....         |
| U. C. | 337 | Fig'd. | <b>Arionellus</b> Barrande.<br>bipunctatus ( <i>Shumard</i> ) <i>H.</i> | “ “         | 16    | 169   | 7     | 50, 51        |
| M. C. | 272 | Type.  | quadrangularis <i>Whitfield.</i>                                        | A. M. N. H. | I     | 147   | 14    | 8, glab. enl. |
|       |     |        | <b>Atops</b> Emmons.....                                                | .....       | ..... | ..... | ..... | .....         |
|       |     |        | <i>trilineata</i> .....                                                 | .....       | ..... | ..... | ..... | .....         |



| LOCALITY.            | REMARKS.                                                                                                                                  |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Troy, N. Y.          | As gen. type of <i>Discinella</i> , but the two specimens here referred to are opercula of the pteropod. Quebec group in the description. |
| .....                | As <i>Serpulites</i> .                                                                                                                    |
| .....                | " "                                                                                                                                       |
| La Grange Mt., Minn. | " " Cast, imbedded.                                                                                                                       |
| Troy, N. Y.          | As type of <i>Theca? triangularis</i> H. Hud. Riv. group in description.                                                                  |
| .....                | As <i>Theca</i> .                                                                                                                         |
| .....                | " "                                                                                                                                       |
| Trempealeau, Wis.    | " " An exterior imprint and an internal cast, imbedded.                                                                                   |
|                      | Two other spec. were used to complete the details of the figures.                                                                         |
| Troy, N. Y.          | As <i>Metoptoma?</i> Almost entire, imb. Hud. R. group in the descr.                                                                      |
| .....                | See <i>Hyolithes</i> .                                                                                                                    |
| .....                | " "                                                                                                                                       |
| .....                | " " <i>americanus</i> .                                                                                                                   |

Class ANNELIDA.

|       |                           |
|-------|---------------------------|
| ..... | See <i>Hyolithellus</i> . |
|-------|---------------------------|

|                       |                                                             |
|-----------------------|-------------------------------------------------------------|
| Susquehanna Riv., Pa. | The casts of several long tubes in quartzite.               |
| Adams, Mass.          | Several casts in quartzite. (Probably of vegetable origin.) |

CRUSTACEA.

Order OSTRACODA.

|               |                              |
|---------------|------------------------------|
| Highgate, Vt. | Group of casts in quartzite. |
|---------------|------------------------------|

|                       |                                                                     |
|-----------------------|---------------------------------------------------------------------|
| Osceola Mills, Minn.  | Imprint of under side of a head and two pygidia. <sup>1</sup>       |
| Trempealeau, Wis.     | Cast of head and of pygid. First fig. completed fr. two other spec. |
| .....                 | See <i>Microdiscus</i> .                                            |
| L. Pepin, Minn.       | Cast of a glabella and of a pygidium.                               |
| Trempealeau, Wis.     | Imprint under side glabella and part of fixed cheeks.               |
| .....                 | See <i>Protypus</i> .                                               |
| Mth. Root Riv., Minn. | Interior imprint of a glabella and of a right movable cheek.        |
|                       | Second locality is incorrect in the explanation of plate.           |
| Braintree, Mass.      | Glabella and fixed cheeks imbedded in slate.                        |
| .....                 | = <i>Ptychoparia</i> .                                              |
| .....                 | See "                                                               |

<sup>1</sup> Many of the blocks from the Upp. Camb. (Potsdam) of Wis., Minn., Iowa and Ill. bear several types and figured specimens each.

Order TRILOBITA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.     | Type or<br>Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.    | REFERENCE.  |         |       |        |                         |
|------------------|-----------------|-----------------------|-------------------------------|-------------|---------|-------|--------|-------------------------|
|                  |                 |                       |                               | Work.       | Vol.    | P.    | Pl.    | Figs.                   |
| L. C.            | $\frac{233}{1}$ | Gen. and<br>Sp. Type. | <b>Barrandia</b> Hall.....    | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <i>Thompsoni</i> .....        | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <i>vermontana</i> .....       | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <b>Bathynotus</b> Hall.       |             |         |       |        |                         |
|                  |                 |                       | holopyga ..... Hall.          | N. Y. S. M. | 12      | 62    | ....   | 3                       |
|                  |                 |                       | “ “                           | Pal. N. Y.  | 3       | 529   | ....   | 1                       |
|                  |                 |                       | “ “                           | N. Y. S. M. | 13      | 118   | ....   | 1                       |
|                  |                 |                       | “ “                           | Geol. Vt.   | 1 and 2 | 371   | 13     | 3                       |
|                  |                 |                       | <b>Calymene</b> Brongniart.   |             |         |       |        |                         |
|                  |                 |                       | <i>Becki</i> .....            | .....       | .....   | ..... | .....  | .....                   |
| U. C.            | 339             | Gen. and<br>Sp. Type. | <b>Chariocephalus</b> Hall.   |             |         |       |        |                         |
|                  |                 |                       | Whitfieldi ..... Hall.        | N. Y. S. M. | 16      | 175   | 6      | 49-53                   |
|                  |                 |                       | “ “ “ “                       | “ “         | 16      | 171   | 6      | 47                      |
|                  |                 |                       | <b>Conaspis</b> Hall.         | “ “         | 16      | 152   |        |                         |
|                  |                 |                       | eos ..... Hall.               | “ “         | 16      | 151   | 7<br>8 | 24, 25<br>8, 9          |
|                  |                 |                       | <i>Conocephalites</i> Zenker. |             |         |       |        |                         |
|                  |                 |                       | <i>anatinus</i> .....         | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <i>binodosus</i> .....        | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <i>diadematus</i> .....       | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <i>eos</i> .....              | .....       | .....   | ..... | .....  | .....                   |
| U. C.            | 322             | Type.                 | <i>eryon</i> .....            | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <i>hamulus</i> .....          | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <i>iowensis</i> .....         | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <i>minor</i> .....            | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <i>minutus</i> .....          | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <i>nactus</i> .....           | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <i>nasutus</i> .....          | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <i>optatus</i> .....          | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <i>Oweni</i> .....            | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <i>Patersoni</i> .....        | .....       | .....   | ..... | .....  | .....                   |
| U. C.            | 322             | Type.                 | <i>perseus</i> .....          | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <i>Shumardi</i> .....         | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <i>verrucosus</i> .....       | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <i>wisconsensis</i> .....     | .....       | .....   | ..... | .....  | .....                   |
|                  |                 |                       | <b>Conocoryphe</b> Corda.     |             |         |       |        |                         |
|                  |                 |                       | optata ..... Hall.            | N. Y. S. M. | 16      | 222   | 5a     | 7                       |
|                  |                 |                       | <b>Crepicephalus</b> Owen.    |             |         |       |        |                         |
|                  |                 |                       | iowensis (Owen)... Hall.      | “ “         | 16      | 162   | 7<br>8 | 29, 32, 33<br>10-12     |
|                  |                 |                       | “ “ “ “                       | “ “         | 16      | 162   | 7<br>8 | 31<br>30                |
|                  |                 |                       | wisconsensis (Owen) Hall.     | “ “         | 16      | 164   | 7<br>8 | 39, 41<br>22-24, 27, 28 |
| L. C.<br>U. C.   | $\frac{316}{2}$ | Fig'd.                | “ “ “ “                       | “ “         | 16      | 164   | 7      | 42                      |
|                  |                 |                       | <b>Dikelocephalus</b> Owen.   |             |         |       |        |                         |
|                  |                 |                       | crassimarginatus.. Whitf.     | Geol. Wis.  | 4       | 344   |        |                         |
|                  |                 |                       | “ “ Hall.                     | N. Y. S. M. | 16      | ....  | 11     | 2                       |
|                  |                 |                       | ? Marcoui... Whitfield.       | A. M. N. H. | 1       | 150   | 14     | 7                       |
|                  |                 |                       | minnesotensis (Owen) H.       | N. Y. S. M. | 16      | 138   | 9      | 5                       |
|                  |                 |                       |                               |             |         |       |        |                         |
|                  |                 |                       |                               |             |         |       |        |                         |
|                  |                 |                       |                               |             |         |       |        |                         |
|                  |                 |                       |                               |             |         |       |        |                         |



| LOCALITY.                               | REMARKS.                                                                                                              |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| .....                                   | See <i>Olenellus</i> .                                                                                                |
| .....                                   | “ “                                                                                                                   |
| .....                                   | “ “                                                                                                                   |
| .....                                   | As <i>Peltura</i> ( <i>Olenus</i> ).                                                                                  |
| .....                                   | “ “ “                                                                                                                 |
| .....                                   | Generic type of <i>Bathynotus</i> . Hud. Riv. grp. in all above descriptions.                                         |
| Georgia, Vt.                            | A nearly perfect exterior imprint. An unfigured imprint of thorax and pygidium is in the type series.                 |
| .....                                   | See <i>Ptychoparia trilineata</i> .                                                                                   |
| Trempealeau, Wis.                       | Internal casts of two glabella and two opposite detached free cheeks.                                                 |
| “ “                                     | Material used in making fig. 20 of pl. 10.                                                                            |
|                                         | As <i>Ptychaspis miniscensis</i> , but is probably of this species. Imprint of left half of a thoracic segment.       |
| Loose at Trempealeau, Wis.              | As <i>Conocephalites</i> . Interior imprint of a glabella with fixed cheeks and the right half of a thoracic segment. |
| .....                                   | See <i>Ptychoparia</i> .                                                                                              |
| .....                                   | “ “                                                                                                                   |
| .....                                   | “ “                                                                                                                   |
| .....                                   | “ <i>Conaspis</i> .                                                                                                   |
| .....                                   | “ <i>Ptychoparia</i> .                                                                                                |
| .....                                   | “ <i>Lonchocephalus</i> .                                                                                             |
| .....                                   | “ <i>Crepicephalus</i> .                                                                                              |
| .....                                   | “ <i>Ptychoparia</i> .                                                                                                |
| .....                                   | “ “                                                                                                                   |
| .....                                   | “ “                                                                                                                   |
| .....                                   | “ <i>Conocoryphe</i> .                                                                                                |
| .....                                   | “ <i>Ptychoparia</i> .                                                                                                |
| .....                                   | “ “                                                                                                                   |
| .....                                   | “ “                                                                                                                   |
| .....                                   | “ “                                                                                                                   |
| .....                                   | “ <i>Crepicephalus</i> .                                                                                              |
| Trempealeau, Wis.                       | As <i>Conocephalites</i> . Figure combined from two imprints of under side of glabella.                               |
| .....                                   | As <i>Conocephalites</i> . Imprints of the parts represented, six specimens.                                          |
| Trempealeau, Wis.                       | Locality incorrectly given for fig. 33, pl. 7, in the description.                                                    |
| In Wis. opp. mouth of Root River, Minn. | As <i>Conocephalites</i> . Interior imprint of glabella and fixed cheeks.                                             |
| .....                                   | “ “                                                                                                                   |
| Trempealeau, Wis.                       | “ “ Int. impr. of the parts represented ; 5 specimens.                                                                |
| 3 miles above Reed's Landing, Minn.     | As <i>Conocephalites</i> . Imprint of cephalic (?) spine of this species (?)                                          |
| La Grange Mt., Minn.                    | As <i>D. pepinensis</i> Owen? Interior imprint left movable cheek.                                                    |
| Georgia, Vt.                            | Exterior imprint of a fragmentary pygidium.                                                                           |
| Mazomanie, Wis.                         | Imprint of under side of glabella and fixed cheeks. Frontal limb has been uncovered since figure was made.            |

Order TRILOBITA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.     | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.       | REFERENCE.  |         |       |        |         |
|------------------|-----------------|----------------------|----------------------------------|-------------|---------|-------|--------|---------|
|                  |                 |                      |                                  | Work.       | Vol.    | P.    | Pl.    | Figs.   |
| U. C.            | $\frac{344}{2}$ | Fig'd.               | <b>Dikelocephalus</b> Owen—Cont. |             |         |       |        |         |
|                  | $\frac{344}{1}$ | "                    | minnesotensis (Owen) H.          | N. Y. S. M. | 16      | 138   | 9      | 5 (pt.) |
|                  |                 | "                    | " " "                            | Geol. Wis.  | I       | 22    | ....   | 2       |
|                  |                 | "                    | " " "                            | N. Y. S. M. | 16      | 138   | 9      | 6       |
|                  | $\frac{344}{3}$ | "                    | " " "                            | " "         | 16      | 138   | 9      | 7       |
|                  | $\frac{344}{1}$ | "                    | " " "                            | Geol. Wis.  | I       | 22    | ....   | 5       |
|                  |                 | "                    | " " "                            | N. Y. S. M. | 16      | 138   | 9      | 8       |
|                  | "               | "                    | " " "                            | " "         | 16      | 138   | 9      | 9       |
|                  | "               | "                    | " " "                            | " "         | 16      | 138   | 9      | 10      |
|                  | "               | "                    | " " var. "                       | " "         | 16      | 141   | 9      | 11      |
|                  | $\frac{344}{6}$ | "                    | " " var. "                       | " "         | 16      | 141   | 10     | 9       |
|                  | "               | "                    | " " "                            | " "         | 16      | 138   | 10     | 10      |
|                  | $\frac{344}{1}$ | "                    | " " "                            | " "         | 16      | 138   | 10     | 12      |
|                  | $\frac{344}{2}$ | "                    | " " "                            | " "         | 16      | 138   | 11     | I       |
|                  | $\frac{344}{1}$ | "                    | " " "                            | " "         | 16      | 138   | 11     | 3       |
|                  | $\frac{344}{2}$ | "                    | " " "                            | " "         | 16      | 138   | 11     | 4       |
|                  | $\frac{345}{1}$ | Type.                | " var. limbatus Hall.            | " "         | 16      | 141   | 9      | 12      |
|                  | $\frac{343}{1}$ | "                    | misa.....Hall.                   | " "         | 16      | 144   | 8      | 15      |
|                  |                 |                      |                                  |             |         |       | 10     | 4-8     |
|                  | 342             | "                    | osceola.....Hall.                | " "         | 16      | 146   | 10     | 18, 19  |
|                  | $\frac{346}{1}$ | Fig'd.               | pepinensis (Owen) Hall.          | Geol. Wis.  | I       | 22    | Ct. 3  | 4       |
|                  |                 |                      | " "                              | N. Y. S. M. | 16      | 142   | 9      | 1-4     |
|                  |                 |                      |                                  |             |         |       | 10     | 13-17   |
| "                | 341             | Type.                | spiniger.....Hall.               | " "         | 16      | 143   | 10     | 1, 2    |
|                  | 342             | Fig'd.               | sp. ? .....Hall.                 | " "         | 16      | 146   | 7      | 49      |
|                  | "               | "                    | " ..... "                        | " "         | 16      | ....  | 10     | 3       |
|                  |                 |                      |                                  |             |         |       |        |         |
|                  |                 |                      | <b>Illænurus</b> Hall.           |             |         |       |        |         |
|                  | 330             | Gen. and<br>Sp.Type. | quadratus..... Hall.             | " "         | 16      | 176   | 7      | 52-57   |
|                  |                 |                      |                                  |             |         |       |        |         |
|                  | $\frac{315}{2}$ | Fig'd.               | <b>Lonchocephalus</b> Owen.      |             |         |       |        |         |
|                  |                 |                      | hamulus (Owen)....Hall.          | " "         | 16      | 166   | 7      | 43      |
|                  |                 |                      |                                  |             |         |       | 8      | 25, 26  |
| "                | $\frac{315}{1}$ | "                    | " " "                            | " "         | 16      | 166   | 7      | 44      |
|                  | "               | "                    | " " "                            | " "         | 16      | 166   | 11     | 5, 6    |
|                  |                 |                      |                                  |             |         |       |        |         |
|                  |                 |                      | Mesonacis Walcott.....           | .....       | .....   | ..... | .....  | .....   |
| U. C.            |                 |                      | <b>Microdiscus</b> Emmons.       |             |         |       |        |         |
|                  | 312             | Type.                | ? bullatus.....Hall.             | N. Y. S. M. | 16      | 221   | 5a     | 3-5     |
| L. C.            | 219             | "                    | lobatus.....Hall.                | Pal. N. Y.  | I       | 258   | 67     | 5a-f    |
| "                |                 |                      | <b>Olenellus</b> Hall.           |             |         |       |        |         |
|                  | $\frac{223}{1}$ | Gen. and<br>Sp.Type. | Thompsoni .....Hall.             | N. Y. S. M. | 12      | 59    | p. 60  | I       |
|                  |                 |                      | " "                              | Pal. N. Y.  | 3       | 525   | p. 526 | I       |
|                  |                 |                      | " "                              | N. Y. S. M. | 15      | 114   | ....   | .....   |
|                  | $\frac{223}{1}$ | "                    | " ..... "                        | " "         | 13      | 116   | ....   | I (pt.) |
|                  |                 |                      | " ..... "                        | Geol. Vt.   | I and 2 | 369   | 13     | I "     |
|                  |                 |                      | " "                              | N. Y. S. M. | 15      | 114   | ....   | .....   |
|                  | "               | Fig'd.               | " (Hall) Whitfield.              | A. M. N. H. | I       | 151   | 15     | I       |
|                  | $\frac{227}{1}$ | Type.                | vermontanus .....Hall.           | N. Y. S. M. | 12      | 60    | ....   | 2       |
|                  |                 |                      | " "                              | Pal. N. Y.  | 3       | 527   | ....   | I       |
|                  |                 |                      | " "                              | N. Y. S. M. | 13      | 117   | ....   | I       |
|                  |                 |                      | " "                              | Geol. Vt.   | I and 2 | 370   | 13     | 2       |
|                  |                 |                      | (Hall) Walcott.                  | Am. J. Sci. | III, 29 | 328   | ...    | .....   |
|                  |                 |                      |                                  |             |         |       |        |         |
|                  | "               | Fig'd.               | " (Hall) Whitfield.              | A. M. N. H. | I       | 152   | 15     | 2-4     |
|                  |                 |                      |                                  |             |         |       |        |         |
|                  |                 |                      |                                  |             |         |       |        |         |



| LOCALITY.                             | REMARKS.                                                                                                                                                                                        |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mazomanie, Wis.                       | Imprint of glabella used in completing frontal limb of figure.                                                                                                                                  |
| La Grange Mt., Minn.                  | Imprint of upper side of a small pygidium.                                                                                                                                                      |
| Madison, Wis.                         | Cast of a large pygidium from a loose block.                                                                                                                                                    |
| La Grange Mt., Minn.                  | Imprint of upper side of right half of a thoracic segment.                                                                                                                                      |
| " "                                   | " inside of a small hypostoma, not perfect.                                                                                                                                                     |
| " "                                   | " " larger " "                                                                                                                                                                                  |
| " "                                   | " " glabella, frontal limb and left fixed cheek.                                                                                                                                                |
| Stillwater, Minn.                     | " " " and fixed cheeks, nearly perfect.                                                                                                                                                         |
| " "                                   | " glabella and fixed cheeks used in making figure.                                                                                                                                              |
| La Grange Mt., Minn.                  | " left half of a thoracic segment.                                                                                                                                                              |
| Mazomanie, Wis.                       | " outside of a very large hypostoma, not perfect.                                                                                                                                               |
| La Grange Mt., Minn.                  | " under side of a right movable cheek.                                                                                                                                                          |
| Mazomanie, Wis.                       | " upper side of a large pygidium.                                                                                                                                                               |
| La Grange Mt., Minn.                  | " part of under side of glabella and right fixed cheek.                                                                                                                                         |
| Trempealeau, Wis.                     | Four int. and two ext. imprints of the parts represented in the figs.                                                                                                                           |
| Osceola Mills, Wis.                   | Interior imprint of a small glabella and exterior imprint right movable cheek. Slab has been split since figures were made.                                                                     |
| La Grange Mt., Minn.                  | { The figures were made from internal imprints of the parts represented. Eight specimens. Fig. 14, pl. 10 is a restoration based on figs. 1 and 3, pl. 9. See also <i>D. crassimarginatus</i> . |
| Trempealeau, Wis.                     | Interior imprint of a glabella and a pygidium on same block.                                                                                                                                    |
| Osceola Mills, Wis.                   | Imprint of upper side of pygidium. Possibly = <i>D. osceola</i> .                                                                                                                               |
| Three mi. above Reed's Landing, Minn. | Imprint of under side of right movable cheek and spine.                                                                                                                                         |
| Osceola Mills, Wis.                   | Imprint of the under sides of parts represented. Six specimens.                                                                                                                                 |
| Miniska, Minn.                        | As <i>Conocephalites</i> . Interior imprint of glabella and fixed cheeks.                                                                                                                       |
| Trempealeau, Wis.                     | " " Imprint of spine, belonging to this species?                                                                                                                                                |
| " "                                   | Impr. of 2 spines. Of this species? Distal extremity in fig. 6 restored.                                                                                                                        |
| .....                                 | See <i>Olenellus</i> .                                                                                                                                                                          |
| Trempealeau, Wis.                     | As generic type of <i>Pemphigaspis</i> . A detached cast of interior. An unfigured type is in the series.                                                                                       |
| Troy, N. Y.                           | As <i>Agnostus</i> . The specimen indicated by Prof. Hall as being the type. Hudson River group in description,                                                                                 |
| .....                                 | As <i>Olenus</i> and referred to Hudson River group.                                                                                                                                            |
| .....                                 | " " " " " " " "                                                                                                                                                                                 |
| Georgia, Vt.                          | Made gen. type of <i>Olenellus</i> . Impr. of large indiv. Impr. of pygidial and left cheek spines can be disting. but were not repr. in the fig.                                               |
| .....                                 | As generic type of <i>Barrandia</i> and referred to Hudson River group.                                                                                                                         |
| .....                                 | " " " " " " " Quebec                                                                                                                                                                            |
| Georgia, Vt.                          | Made gen. type of <i>Olenellus</i> . Impr. of pygid. thor. and pt. mov. ch'ks.                                                                                                                  |
| " "                                   | A large, almost perfect individual, in slate.                                                                                                                                                   |
| .....                                 | As <i>Olenus</i> and referred to Hudson River group.                                                                                                                                            |
| .....                                 | " " " " " "                                                                                                                                                                                     |
| .....                                 | As <i>Barrandia</i> .                                                                                                                                                                           |
| .....                                 | " " and referred to Quebec group.                                                                                                                                                               |
| Georgia, Vt.                          | Made generic type of <i>Mesonacis</i> Walcott. Head and six thoracic segments imbedded in slate.                                                                                                |
| Georgia, Vt.                          | Two individuals and the imprint of a cephalic shield.                                                                                                                                           |

Order TRILOBITA—*Continued.*

| Geol. Subdiv.                                            | Cat. No.          | Type or Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.                       | REFERENCE.        |         |                                      |                   |                     |
|----------------------------------------------------------|-------------------|---------------------|--------------------------------------------------|-------------------|---------|--------------------------------------|-------------------|---------------------|
|                                                          |                   |                     |                                                  | Work.             | Vol.    | P.                                   | Pl.               | Figs.               |
| L. C.                                                    | 232               | Gen. and Sp. Type.  | <b>Olenus</b> Dalman.                            |                   |         |                                      |                   |                     |
|                                                          |                   |                     | <i>Thompsoni</i> . . . . .                       |                   |         |                                      |                   |                     |
|                                                          |                   |                     | <i>undulostriatus</i> . . . . .                  |                   |         |                                      |                   |                     |
|                                                          |                   |                     | <i>vermontanus</i> . . . . .                     |                   |         |                                      |                   |                     |
|                                                          |                   |                     | <b>Peltura</b> Milne-Edw.                        |                   |         |                                      |                   |                     |
| U. C.                                                    | 331<br>1          | Fig'd Sp. and G. T. | <i>holopyga</i> . . . . .                        |                   |         |                                      |                   |                     |
|                                                          |                   |                     | <i>Pemphigaspis</i> Hall. . . . .                |                   |         |                                      |                   |                     |
|                                                          |                   |                     | <i>bullata</i> . . . . .                         |                   |         |                                      |                   |                     |
|                                                          |                   |                     | <b>Protypus</b> Walcott.                         |                   |         |                                      |                   |                     |
|                                                          |                   |                     | <i>Hitchcocki</i> . . . . . <i>Whitfield</i> .   | A. M. N. H.       | I       | 148                                  | 14                | 13, <i>enl.</i> X 2 |
|                                                          |                   |                     | <i>Walcott</i> .                                 | U. S. G. S.       | Bul. 30 | 211                                  |                   |                     |
|                                                          |                   |                     | <b>Ptychaspis</b> Hall.                          |                   |         |                                      |                   |                     |
|                                                          |                   |                     | <i>granulosa</i> . . . . .                       |                   |         |                                      |                   |                     |
|                                                          |                   |                     | <i>miniscensis</i> ( <i>Owen</i> ) <i>Hall</i> . | N. Y. S. M.       | 16      | 171                                  | 6                 | 41-46               |
|                                                          |                   |                     | <i>striata</i> . . . . . <i>Whitfield</i> .      | Geol. Wis.        | 4       | 186                                  |                   |                     |
|                                                          |                   |                     | <i>Hall</i> .                                    | N. Y. S. M.       | 16      | 173                                  | 6                 | 33-39               |
|                                                          |                   |                     | <i>"</i> ( <i>Whitfield</i> ) <i>"</i>           | <i>"</i> <i>"</i> | 16      | 173                                  | 6                 | 40                  |
|                                                          |                   |                     | <i>"</i> <i>"</i> <i>"</i> <i>"</i>              | <i>"</i> <i>"</i> | 16      | 173                                  | 8                 | 13                  |
|                                                          |                   |                     | <i>sp.?</i> . . . . . <i>Hall</i> .              | <i>"</i> <i>"</i> | 16      | 174                                  | 6                 | 48, <i>enl.</i> X 3 |
|                                                          |                   |                     | U. C.                                            | 329<br>1          | Type.   | <b>Ptychoparia</b> Corda.            |                   |                     |
| <i>anatina</i> . . . . . <i>Hall</i> .                   | <i>"</i> <i>"</i> | 16                  |                                                  |                   |         | 158                                  | 7                 | 34, 35              |
| <i>"</i> <i>"</i> <i>"</i> <i>"</i>                      | <i>"</i> <i>"</i> | 16                  |                                                  |                   |         | 158                                  | 8                 | 29                  |
| <i>binodosa</i> . . . . . <i>Hall</i> .                  | <i>"</i> <i>"</i> | 16                  |                                                  |                   |         | 160                                  | 7                 | 47, 48              |
| <i>diademata</i> . . . . . <i>Hall</i> .                 | <i>"</i> <i>"</i> | 16                  |                                                  |                   |         | 167                                  | 7                 | 36, 38a             |
| <i>"</i> <i>"</i> <i>"</i> <i>"</i>                      | <i>"</i> <i>"</i> | 16                  |                                                  |                   |         | 167                                  | 7                 | 37, 38              |
| <i>"</i> <i>"</i> <i>"</i> <i>"</i>                      | <i>"</i> <i>"</i> | 16                  |                                                  |                   |         | 167                                  | 8                 | 18, 21              |
| <i>eryon</i> . . . . . <i>Hall</i> .                     | <i>"</i> <i>"</i> | 16                  |                                                  |                   |         | 157                                  | 7                 | 10-12, 16           |
| <i>"</i> <i>"</i> <i>"</i> <i>"</i>                      | <i>"</i> <i>"</i> | 16                  |                                                  |                   |         | 157                                  | 8                 | 16                  |
| <i>"</i> <i>"</i> <i>"</i> <i>"</i>                      | <i>"</i> <i>"</i> | 16                  |                                                  |                   |         | 157                                  | 7                 | 13-15               |
| <i>minor</i> ( <i>Shumard</i> ) . . . . . <i>Hall</i> .  | <i>"</i> <i>"</i> | 16                  |                                                  |                   |         | 149                                  | 8                 | 31                  |
| <i>minuta</i> ( <i>Bradley</i> ) . . . . . <i>Hall</i> . | <i>"</i> <i>"</i> | 16                  |                                                  |                   |         | 150                                  | 8                 | 1-4                 |
| <i>nacta</i> . . . . . <i>Hall</i> .                     | <i>"</i> <i>"</i> | 16                  |                                                  |                   |         | 200                                  | 7                 | 5, 6                |
| <i>nasuta</i> . . . . . <i>Hall</i> .                    | <i>"</i> <i>"</i> | 16                  |                                                  |                   |         | 155                                  | 7                 | 58                  |
| L. C.                                                    | 318<br>1          | Type.               |                                                  |                   |         | <i>Oweni</i> . . . . . <i>Hall</i> . | <i>"</i> <i>"</i> | 16                  |
|                                                          |                   |                     | <i>Patersoni</i> . . . . . <i>Hall</i> .         | <i>"</i> <i>"</i> | 16      | 159                                  | 7                 | 17, 20              |
|                                                          |                   |                     | <i>perseus</i> . . . . . <i>Hall</i> .           | <i>"</i> <i>"</i> | 16      | 153                                  | 7                 | 45, 46              |
|                                                          |                   |                     | <i>"</i> <i>"</i> <i>"</i> <i>"</i>              | <i>"</i> <i>"</i> | 16      | 153                                  | 7                 | 17                  |
|                                                          |                   |                     | <i>"</i> <i>"</i> <i>"</i> <i>"</i>              | <i>"</i> <i>"</i> | 16      | 153                                  | 8                 | 33                  |
|                                                          |                   |                     | <i>"</i> <i>"</i> <i>"</i> <i>"</i>              | <i>"</i> <i>"</i> | 16      | 153                                  | 7                 | 18-20               |
|                                                          |                   |                     | <i>"</i> <i>"</i> <i>"</i> <i>"</i>              | <i>"</i> <i>"</i> | 16      | 153                                  | 7                 | 21-23               |
|                                                          |                   |                     | <i>Shumardi</i> . . . . . <i>Hall</i> .          | <i>"</i> <i>"</i> | 16      | 154                                  | 7                 | 1, 2                |
|                                                          |                   |                     | <i>"</i> <i>"</i> <i>"</i> <i>"</i>              | <i>"</i> <i>"</i> | 16      | 154                                  | 8                 | 32                  |
|                                                          |                   |                     | <i>trilineata</i> . . . . . <i>Emmons</i> .      | Agric. N. Y.      | I       | 64                                   | Fig. 8            | No. I               |
|                                                          |                   |                     | <i>Hall</i> .                                    | Pal. N. Y.        | I       | 252                                  | 67                | 4a                  |
|                                                          |                   |                     | <i>Walcott</i> .                                 | U. S. G. S.       | Bul. 30 | 203                                  | 27                | I                   |
|                                                          |                   |                     | <i>verrucosa</i> . . . . . <i>Whitfield</i> .    | A. M. N. H.       | I       | 146                                  | 14                | 9-12                |



| LOCALITY.                                  | REMARKS.                                                                                                                               |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| .....                                      | See <i>Olenellus</i> .                                                                                                                 |
| .....                                      | “ <i>Bathyrurus</i> .                                                                                                                  |
| .....                                      | “ <i>Olenellus</i> .                                                                                                                   |
| .....                                      | “ <i>Bathynotus</i> .                                                                                                                  |
| .....                                      | Probably = <i>Microdiscus</i> .                                                                                                        |
| .....                                      | See <i>Microdiscus</i> .                                                                                                               |
| .....<br>Georgia, Vt.                      | As <i>Angelina</i> . Very perfect individual, compressed, imbedded.<br>Made generic type of <i>Protypus</i> .                          |
| .....                                      | See <i>P. striata</i> .                                                                                                                |
| Trempealeau, Wis.                          | Imprint of the parts represented. Figs. 41 and 46 are partly restorations. Five specimens. See also <i>Chariocephalus Whitfieldi</i> . |
| “ “                                        | As <i>P. granulosa</i> Owen. Impr. of the parts represented. Five spec.                                                                |
| In Minn. opp. mouth<br>Chippewa Riv., Wis. | As <i>P. granulosa</i> Owen.<br>Imprint of under side of left half of a large pygidium.                                                |
| .....                                      | As <i>P. granulosa</i> Owen.                                                                                                           |
| Trempealeau, Wis.                          | Imprint of upper side of pygidium.                                                                                                     |
| “ “                                        | “ “ “ “ “ head.                                                                                                                        |
| 3 miles above Reed’s<br>Landing, Minn.     | As <i>Conocephalites</i> . Imprint under side of somewhat imperfect glabella and of a right movable cheek.                             |
| Trempealeau, Wis.                          | As <i>Conocephalites</i> . Imprint under side of glabella, nearly perfect.                                                             |
| Osceola Mills, Wis.                        | “ “ ? Imprint of a pygidium and a right mov. cheek.                                                                                    |
| Marine Mills, Wis.                         | “ “ Impr. of glabella and cast of doublure of glab.                                                                                    |
| Mth. Root Riv., Minn.                      | “ “ “ “ and of right movable cheek.                                                                                                    |
| Marine Mills, Wis.                         | “ “ Int. impr. of a glab. and a pyg. ref. to this species.                                                                             |
| .....                                      | “ “ Interior imprints of the parts represented.                                                                                        |
| Trempealeau, Wis.                          | Four specimens.                                                                                                                        |
| 10 miles east of La<br>Crosse, Wis.        | As <i>Conocephalites</i> . Imprints of under side of parts of three thoracic segments and of a glabella, etc.                          |
| Trempealeau, Wis.                          | As <i>Conocephalites</i> . Impr. of 4 glab., a left mov. cheek and a pygidium.                                                         |
| Au Sable Chasm, N. Y.                      | “ “ Glabella, imbedded. Spine restored.                                                                                                |
| Mth. Black River, Wis.                     | “ “ Interior imprint glabella without fixed cheeks.                                                                                    |
| Kickapoo, Wis.                             | “ “ Interior imprint of the parts represented, except<br>figs. 4 and 8, which are from exterior imprints. Seven specimens.             |
| Marine Mills, Minn.                        | As <i>Conocephalites</i> . Interior imprints of a glabella and of a right movable cheek ; not on same block.                           |
| 3 miles above Reed’s<br>Landing, Minn.     | As <i>Conocephalites</i> . The first is from an interior, the second from an exterior imprint.                                         |
| Kickapoo, Wis.                             | As <i>Conocephalites</i> . Interior imprint glabella and fixed cheeks.                                                                 |
| In Minn. opp. mouth                        | “ “ “ “ and of detached right                                                                                                          |
| Chippewa Riv., Wis.                        | movable cheek. Locality incorrect in description.                                                                                      |
| Mth. Root Riv., Minn.                      | As <i>Conocephalites</i> . Imprints of the parts represented. Three spec.                                                              |
| .....                                      | “ “ Interior imprints of a glabella with fixed cheeks,<br>a pygidium and a very large imperfect glabella.                              |
| Kickapoo, Wis.                             | As <i>Conocephalites</i> . Interior imprint left movable cheek.                                                                        |
| Marine Mills, Minn.                        | As generic type of <i>Atops</i> .                                                                                                      |
| .....                                      | “ <i>Calymene Becki</i> Green.                                                                                                         |
| No. Bald Mt., Wash-<br>ington Co., N. Y.   | Exterior imprint of head and three thoracic segments.                                                                                  |
| Au Sable Chasm, N. Y.                      | As <i>Conocephalites</i> . Two glabellas with their fixed cheeks, an im-<br>perfect left movable cheek and two pygidia.                |

Order TRILOBITA—Continued.

| Geol. Subdiv. | Cat. No.        | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                  | REFERENCE.  |       |       |       |       |
|---------------|-----------------|-------------------|-----------------------------------------------------------------------------|-------------|-------|-------|-------|-------|
|               |                 |                   |                                                                             | Work.       | Vol.  | P.    | Pl.   | Figs. |
| U. C.         | $\frac{350}{1}$ | Gen. and Sp.Type. | <b>Triarthrella</b> Hall.<br>auroralis.....Hall.                            | N. Y. S. M. | 16    | 177   | 9     | 13    |
|               |                 |                   | <b>Triarthrus</b> Green.<br>s. g. <b>Triarthrella</b> ..Hall.<br>auroralis. | .....       | ..... | ..... | ..... | ..... |
| U. C.         | 348             | Fig'd.            | Genus? sp.?.....Hall.                                                       | N. Y. S. M. | 16    | ....  | 8     | 14    |

Order MEROSTOMATA.

|       |                 |                   |                                              |              |    |     |      |              |
|-------|-----------------|-------------------|----------------------------------------------|--------------|----|-----|------|--------------|
| U. C. | $\frac{351}{1}$ | Gen. and Sp.Type. | <b>Aglaspis</b> Hall.<br>Barrandii.....Hall. | Can. N. & G. | 7  | 445 | .... | I            |
| "     | "               | "                 | "....."                                      | N. Y. S. M.  | 16 | 181 | 11   | 7, 10        |
| "     | "               | "                 | "....."                                      | " "          | 16 | 181 | 11   | 8,9,11-14,16 |
| "     | $\frac{351}{2}$ | "                 | "....."                                      | " "          | 16 | 181 | 11   | 15           |

Lower Silurian.

Kingdom PLANTÆ.

Subkingdom

|       |                 |                   |                                                                |             |       |      |      |             |
|-------|-----------------|-------------------|----------------------------------------------------------------|-------------|-------|------|------|-------------|
| Tr.   | 866             | Gen. and Sp.Type. | <b>Buthograptus</b> Hall.<br>laxus.....Hall.<br>Whitfield.     | Geol. Wis.  | 1861  | 19   |      |             |
|       |                 |                   | "                                                              | A. M. N. H. | 6     | 351  | 11   | 1-3         |
|       |                 |                   | "                                                              | Mem. A. M.  | 1     | 40   | 4    | 1-3         |
| H. R. | 1114            | Type.             | <b>Buthotrephis</b> Hall.<br>subnodosa.....Hall.               | Pal. N. Y.  | 1     | 262  | 68   | 3a, b       |
| Tr.   | $\frac{625}{3}$ | "                 | succulens....."                                                | " "         | 1     | 62   | 22   | 2a          |
| "     | 865             | Gen. and Sp.Type. | <b>Callithamnopsis</b> Whitfield.<br>fruticosa.....Hall.       | Can. O. R.  | Dec.2 | 50   | .... | .....       |
|       |                 |                   | Whitfield.                                                     | A. M. N. H. | 6     | 354  | 11   | 4-8         |
|       |                 |                   | "                                                              | Mem. A. M.  | 1     | 42   | 4    | 4-8         |
| "     | 858             | "                 | <b>Chætocladius</b> Whitfield.<br>plumula.....Whitfield.       | A. M. N. H. | 6     | 356  | 11   | 11-13       |
|       |                 |                   | "                                                              | Mem. A. M.  | 1     | .... | 4    | 11-13       |
| "     | 4494            | Type.             | <b>Chætomorpha</b> Kützing.<br>? prima.....Whitfield.          | A. M. N. H. | 6     | 355  | 11   | 9, 10       |
|       |                 |                   | "                                                              | Mem. A. M.  | 1     | .... | 4    | 9, 10       |
| Be.   | 623             | "                 | <b>Palæophycus</b> Hall.<br>simplex... ..Hall.                 | Pal. N. Y.  | 1     | 63   | 22   | 1a-c        |
| "     | 624             | Fig'd.            | sp. .... "                                                     | " "         | 1     | .... | 21   | 3           |
| "     | 570             | Type.             | <b>Phytopsis</b> Hall.<br>cellulosa.....Hall.                  | " "         | 1     | 39   | 9    | 1, 1a, b, d |
| "     | $\frac{573}{3}$ | Gen. and Sp.Type. | tubulosa.....Hall.                                             | " "         | 1     | 38   | 8    | 1           |
| Tr.   | 635             | "                 | <b>Primicorallina</b> Whitfield.<br>trentonensis... Whitfield. | A. M. N. H. | 6     | 357  | 11   | 14-17       |
|       |                 |                   | "                                                              | Mem. A. M.  | 1     | .... | 4    | 14-17       |
| H. R. | 1112            | Type.             | <b>Sphenothallus</b> Hall.<br>latifolius.....Hall.             | Pal. N. Y.  | 1     | 262  | 68   | 2d          |



| LOCALITY.            | REMARKS.                                                                         |
|----------------------|----------------------------------------------------------------------------------|
| La Grange Mt., Minn. | As <i>Triarthrus</i> ? subgenus <i>Triarthrella</i> . Interior imprint glabella. |
| .....                | See <i>Triarthrella</i> .                                                        |
| Trempealeau, Wis.    | Imprint of the under side of a pygidium.                                         |

|                 |                                                                                                                                                                                                            |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mazomanie, Wis. | About three-fourths of a large carapace, imbedded.<br>Imprints of the parts represented. Seven specimens. Fig. 9 was made from the imprint of the upper side of a carapace.<br>Imprint of a caudal? spine. |
| “ “             |                                                                                                                                                                                                            |
| Miniska, Minn.  |                                                                                                                                                                                                            |

CRYPTOGAMIA.

Class THALLOGENA.

|                      |                                                                                                     |
|----------------------|-----------------------------------------------------------------------------------------------------|
| Platteville, Wis.    | Several stipes on one block.                                                                        |
| Turin, N. Y.         | Imperfect imprint of two fragments.                                                                 |
| Glens Falls, N. Y.   | Portion of a large individual, scarcely compressed.                                                 |
| .....                | As <i>Oldhamia</i> ?                                                                                |
| Platteville, Wis.    | Five fragments of stipes imbedded in two blocks.                                                    |
| “ “                  | A considerable fragment of frond, imbedded.                                                         |
| “ “                  | Two specimens on the same block. These were a part of the types of <i>Oldhamia? fruticosa</i> Hall. |
| Middleville, N. Y.   | Portions of two large stems.                                                                        |
| “ “                  | A stem with four branches.                                                                          |
| Watertown, N. Y.     | Three weathered blocks showing the stems.                                                           |
| Near Amsterdam, N.Y. | A weathered block showing stems.                                                                    |
| Middleville, N. Y.   | Three stipes or fronds, imbedded.                                                                   |
| Schoharie, N. Y.     | A fragment of a leaf, imbedded.                                                                     |

Kingdom ANIMALIA. Subkingdom PROTOZOA. Class

| Geol. Subdiv. | Cat. No.        | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                       | REFERENCE.               |           |          |     |       |
|---------------|-----------------|-------------------|------------------------------------------------------------------|--------------------------|-----------|----------|-----|-------|
|               |                 |                   |                                                                  | Work.                    | Vol.      | P.       | Pl. | Figs. |
| Tr.           | 629             | Type.             | <b>Receptaculites</b> de France.<br>cyathiformis . . . . . Hall. | Pal. N. Y.               | I         | 72       | 25  | 6a-c  |
| "             | 863             | "                 | fungosus . . . . . Hall.<br>Whitfield.                           | Geol. Wis.<br>Mem. A. M. | 1861<br>I | 15<br>45 | 5   | 5, 6  |
| "             | 1022            | "                 | globularis . . . . . Hall.<br>Whitfield.                         | Geol. Wis.<br>Mem. A. M. | 1861<br>I | 16<br>44 | 5   | 7     |
| "             | 631a            | Fig'd.            | neptunei (de Fr.) . . . Hall.                                    | Pal. N. Y.               | I         | 68       | 24  | 3a-d  |
| "             | $\frac{861}{4}$ | Type.             | Oweni . . . . . Hall.<br>"                                       | Geol. Wis.<br>"          | 1861<br>I | 13<br>46 |     | 2     |
| "             | $\frac{861}{3}$ | "                 | " (Hall) "                                                       | Mem. A. M.               | I         | 44       | 5   | 8     |
| "             | $\frac{861}{6}$ | "                 | " " "                                                            | " "                      | I         | 44       | 5   | 9     |
| "             | $\frac{861}{5}$ | "                 | " " "                                                            | " "                      | I         | 44       | 5   | 10    |
|               |                 |                   | Genus ?<br>cyathiformis . . . . .                                |                          |           |          |     | 11    |

Subkingdom PORIFERA.

|    |       |                    |                                                                |             |   |     |    |      |
|----|-------|--------------------|----------------------------------------------------------------|-------------|---|-----|----|------|
| U. | 1017a | Type.              | <b>Rhombodictyon</b> Whitfield.<br>discum . . . . . Whitfield. | A. M. N. H. | I | 348 | 35 | I    |
| "  | 1015a | Gen. and Sp. Type. | reniforme . . . . . Whitfield.                                 | " "         | I | 347 | 35 | 2-7  |
| "  | 1016a | Type.              | " var. rhombiforme W.                                          | " "         | I | 348 | 35 | 8, 9 |

Subkingdom CŒLEENTERATA.

|       |                 |        |                                                                                               |            |   |     |    |          |
|-------|-----------------|--------|-----------------------------------------------------------------------------------------------|------------|---|-----|----|----------|
|       |                 |        | <b>Chætetes</b> Fischer.<br>columnaris . . . . .<br>lycoperdon . . . . .<br>rugosus . . . . . |            |   |     |    |          |
| B. R. | $\frac{592}{1}$ | Fig'd. | <b>Columnaria</b> Goldfuss.<br>alveolata (Goldfuss) Hall.                                     | Pal. N. Y. | I | 47  | 12 | 1a-c     |
| H. R. | 11171           | Type.  | <b>Diphyphyllum</b> Lonsdale.<br>obsoletum . . . . . Hall.                                    | Lake Sup.  | 2 | 213 | 29 | 2a, b    |
| Tr.   | 643             | "      | <b>Favosites</b> Lamarck.<br>columnaris . . . . . Hall.                                       | Pal. N. Y. | I | 68  | 23 | 4, 4a    |
|       |                 |        | <b>Gorgonia</b> Linn.<br>? perantiqua . . . . .                                               |            |   |     |    |          |
|       |                 |        | <b>Porites</b> Lamarck.<br>? vetustus . . . . .                                               |            |   |     |    |          |
| Tr.   | 642             | Type.  | <b>Protaræa</b> Edw. & Haime.<br>vetusta . . . . . Hall.                                      | Pal. N. Y. | I | 71  | 25 | 5a, b    |
|       |                 |        | <b>Sarcinula</b> Lamarck.<br>? obsoleta . . . . .                                             |            |   |     |    |          |
| Tr.   | $\frac{645}{2}$ | Type.  | <b>Streptelasma</b> Hall . . . . .<br>corniculum . . . . . Hall.                              | Pal. N. Y. | I | 69  | 25 | 1a, c, d |
| "     | $\frac{645}{1}$ | "      | " " "                                                                                         | " "        | I | 69  | 25 | 1b       |
| "     | $\frac{647}{1}$ | "      | crassum . . . . . Hall.<br>expansum . . . . .                                                 | " "        | I | 70  | 25 | 2a, b    |
| Tr.   | 646             | Type.  | parvulum . . . . . Hall.                                                                      | Pal. N. Y. | I | 71  | 25 | 4a-c     |
| B. R. | 594             | "      | profundum . . . . . Hall.                                                                     | " "        | I | 49  | 12 | 4, 4c    |
|       |                 |        | Streptoplasma Hall . . . . .                                                                  |            |   |     |    |          |



RHIZOPODA ?

Order FORAMINIFERA ?

| LOCALITY.                                                         | REMARKS.                                                                                                                                                                    |
|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Carlisle, Penn.                                                   | Probably = <i>R. iowensis</i> Owen. Upper part of an individual, not referred to a genus in the description.                                                                |
| Rockford, Ill.                                                    | Detached individual. Galena horizon.                                                                                                                                        |
| Mt. Morris, Ill.<br>Carlisle, Penn.                               | An almost perfect individual. Galena horizon.<br>A fragment showing surface and longitudinal section.                                                                       |
| Rockford, Ill.<br>Galena, Ill.<br>Watertown, Wis.<br>Beloit, Wis. | Crust on the limestone. Galena horizon.<br>Large fragment, imbedded. Galena horizon.<br>Crust, and imprint of the surface ornamentation.<br>Crust imbedded. Galena horizon. |
| .....                                                             | See <i>Receptaculites</i> .                                                                                                                                                 |

Class PLETHOSPONGIÆ.

|                |                                            |
|----------------|--------------------------------------------|
| Kenwood, N. Y. | Imbedded.                                  |
| “ “            | Three individuals or fragments, imbedded.  |
| “ “            | Two fragments on block with the preceding. |

Class ACTINOZOA.

|                                     |                                                                           |
|-------------------------------------|---------------------------------------------------------------------------|
| .....                               | See <i>Favosites</i> .                                                    |
| .....                               | “ <i>Monticulipora</i> , <i>Stenopora</i> sp., and <i>Trematopora</i> sp. |
| .....                               | “ <i>Monticulipora</i> .                                                  |
| Watertown, N. Y.                    | Two fragments, one showing a longit. and the other a cross section.       |
| Green Bay, L. Mich.                 | As <i>Sarcinula</i> ? A fragment and a water-worn pebble.                 |
| Sugar River, Lewis<br>County, N. Y. | As <i>Chætetes</i> ? Large, irregular mass, part of which was figured.    |
| .....                               | See <i>Enallopora</i> .                                                   |
| .....                               | See <i>Protaræa</i> .                                                     |
| Watertown, N. Y.                    | As <i>Porites</i> ? Weathered colony, imbedded.                           |
| .....                               | See <i>Diphyphyllum</i> .                                                 |
| .....                               | All as <i>Streptoplasma</i> in Pal. N. Y., vol. 1.                        |
| Watertown, N. Y.                    | Two small individuals, one of which shows internal structure.             |
| Middleville, N. Y.                  | An individual imbedded at the cup.                                        |
| “ “                                 | The specimen represented by the figure.                                   |
| .....                               | See <i>Crinoid plates</i> .                                               |
| Middleville, N. Y.                  | A nearly entire individual and an imbedded group of four.                 |
| Watertown, N. Y.                    | Two somewhat imperfect individuals.                                       |
| .....                               | See <i>Streptelasma</i> .                                                 |

Class ?      Order MONTICULIPOROIDEA.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                             | REFERENCE. |      |     |     |                    |
|---------------|------------------|-------------------|------------------------------------------------------------------------|------------|------|-----|-----|--------------------|
|               |                  |                   |                                                                        | Work.      | Vol. | P.  | Pl. | Figs.              |
| Tr.           | 672              | Type.             | <b>Constellaria</b> Dana.<br>antheloidea.....Hall.                     | Pal. N. Y. | I    | 79  | 26  | 10a, b             |
| "             | $\frac{637}{2}$  | Fig'd.            | <b>Monticulipora</b> d'Orbigny.<br>? lycoperdon (Say) Hall.            | " "        | I    | 64  | 23  | 1b, c              |
| "             | $\frac{637}{1}$  | "                 | " " "                                                                  | " "        | I    | 64  | 23  | 1e                 |
| "             | "                | "                 | " " "                                                                  | " "        | I    | 64  | 23  | 1f                 |
| "             | "                | "                 | " " "                                                                  | " "        | I    | 64  | 23  | 1g                 |
| " ?           | $\frac{637}{2}$  | "                 | " " "                                                                  | " "        | I    | 64  | 23  | 1h, i              |
| "             | $\frac{637}{4}$  | "                 | " " "                                                                  | " "        | I    | 64  | 24  | 1a, b              |
| "             | $\frac{637}{7}$  | "                 | " " "                                                                  | " "        | I    | 64  | 24  | 1c, n. s.          |
| "             | $\frac{637}{1}$  | "                 | " " "                                                                  | " "        | I    | 64  | 24  | 1d, n. s.          |
| H. R.         | $\frac{637}{12}$ | "                 | " " "                                                                  | " "        | I    | 276 | 75  | 2c                 |
| "             | $\frac{637}{9}$  | "                 | " " "                                                                  | " "        | I    | 276 | 75  | 2d                 |
| "             | $\frac{874}{2}$  | "                 | Ortoni (Nich.) ? ....Hall.                                             | " "        | I    | 277 | 75  | 4                  |
| Tr.           | 636              | Type.             | ? rugosa .....Hall.<br><i>Stellipora</i> Hall.....<br>antheloidea..... | " "        | I    | 67  | 24  | 2a, b              |
| Tr.           | 639              | Fig'd.            | <b>Stenopora</b> Lonsdale.<br>sp. ....Hall.                            | Pal. N. Y. | I    | 64  | 24  | 1g-i               |
| "             | 671              | "                 | <b>Trematopora</b> Hall.<br>sp. ....Hall.                              | " "        | I    | 64  | 24  | 1m, n <sup>†</sup> |
| "             | 670              | "                 | " ..... "                                                              | " "        | I    | 64  | 24  | 1k, n              |

Class HYDROZOA.

|     |                  |                   |                                                       |             |        |      |      |               |
|-----|------------------|-------------------|-------------------------------------------------------|-------------|--------|------|------|---------------|
| U.  | 1045             | Type.             | <b>Amphigraptus</b> Lapworth.<br>divergens .....Hall. | Pal. N. Y.  | 3      | 509  | .... | 9, n. s.      |
|     |                  |                   | " " "                                                 | N. Y. S. M. | 12     | 57   | .... | 9, n. s.      |
|     |                  |                   | " " "                                                 | Can. O. R.  | Dec. 2 | 13   | ...  | 11, n. s.     |
|     |                  |                   | " " "                                                 | N. Y. S. M. | 20     | 179  | .... | 12, n. s.     |
| "   | $\frac{1041}{5}$ | Gen. and Sp.Type. | <b>Climacograptus</b> Hall.<br>bicornis .....Hall.    | Pal. N. Y.  | I      | 268  | 73   | 2a, b         |
| "   | $\frac{1041}{1}$ | "                 | " ..... "                                             | " "         | I      | 268  | 73   | 2c, d         |
|     |                  |                   | " " "                                                 | Can. O. R.  | Dec. 2 | .... | A    | 16            |
|     |                  |                   | " " "                                                 | N. Y. S. M. | 20     | .... | 2    | 16            |
| "   | "                | "                 | " ..... "                                             | Pal. N. Y.  | I      | 268  | 73   | 2f, h, l, m   |
| "   | $\frac{1041}{5}$ | "                 | " ..... "                                             | " "         | I      | 268  | 73   | 2i, k, m'', n |
| "   | $\frac{1041}{1}$ | Fig'd.            | " ..... "                                             | " "         | I      | 271  | 73   | 4a-d          |
| "   | "                | Gen. and Sp.Type  | " ..... "                                             | Can. O. R.  | Dec. 2 | .... | A    | 13-15, 17     |
|     |                  |                   | " " "                                                 | N. Y. S. M. | 20     | .... | 2    | 13-15, 17     |
| "   | 1042             | Fig'd.            | parvus .....Hall.                                     | Pal. N. Y.  | I      | 268  | 73   | 2p, s         |
| "   | "                | "                 | " " "                                                 | " "         | I      | 271  | 73   | 4g            |
| " ? | 1090             | Type.             | typicalis .....Hall.                                  | Can. O. R.  | Dec. 2 | .... | A    | 2-8           |
|     |                  |                   | " " "                                                 | N. Y. S. M. | 20     | .... | 2    | 2-8           |
| "   | $\frac{1043}{1}$ | Gen. and Sp.Type. | <b>Cœnograptus</b> Hall.<br>gracilis .....Hall.       | Pal. N. Y.  | I      | 274  | 74   | 6a, c, d      |
| "   | "                | "                 | " ..... "                                             | N. Y. S. M. | 12     | 58   | .... | 10            |
|     |                  |                   | " " "                                                 | Pal. N. Y.  | 3      | 511  | .... | 1, 3-6        |
|     |                  |                   | " " "                                                 | N. Y. S. M. | 13     | 56   | ...  | 1, 3-6        |
|     |                  |                   | " " "                                                 | Can. O. R.  | Dec.2  | 13   | .... | 12, 14-17     |
|     |                  |                   | " " "                                                 | N. Y. S. M. | 20     | 179  | .... | 13, 15-18     |



| LOCALITY.           | REMARKS.                                                                                                                              |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Lowville, N. Y.     | As generic type of <i>Stellipora</i> . On the same block with type of <i>Retepora?</i> <i>foliacea</i> = <i>Bucania punctifrons</i> . |
| Watertown, N. Y.    | As <i>Chætetes</i> . Small, hemispherical mass.                                                                                       |
| Middleville, N. Y.  | " " Irregular mass showing coalescence of individuals.                                                                                |
| " "                 | " " A somewhat slickensided individual.                                                                                               |
| " "                 | " " Irregular mass supposed to show origin of branches.                                                                               |
| Watertown, N. Y.    | " " Large mass of which only a small part was figured.                                                                                |
|                     | Enlargement perfected from another fragment. 11 on plate.                                                                             |
| Lowville, N. Y.     | As <i>Chætetes</i> . Small crescentic mass, imbedded.                                                                                 |
| L. Champlain, N. Y. | " " Base of hemispherical form on d. v. of <i>Orthis testudinaria</i> .                                                               |
| Middleville, N. Y.  | As <i>Chætetes</i> . Small base of attachment.                                                                                        |
| W. Turin, N. Y.     | " " Branching form, very large for this group.                                                                                        |
| Turin, N. Y.        | " " Imbedded pyriform colony attached to crinoid stem.                                                                                |
| " "                 | As "undetermined". A bryozoan? The impression of a large colony on an orthoceras.                                                     |
| Middleville, N. Y.  | As <i>Chætetes</i> . Individual showing base of three branches.                                                                       |
| .....               | = <i>Constellaria</i> .                                                                                                               |
| .....               | See " "                                                                                                                               |
| Lowville, N. Y.     | As <i>Chætetes lycoperdon</i> . Branched form.                                                                                        |
| Middleville, N. Y.  | " " " Imbedded.                                                                                                                       |
| Lowville, N. Y.     | " " " Slab showing several detached branches.                                                                                         |

|                             |                                                                                                                                                                                                                                     |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                       | Described by Hall as <i>Graptolithus</i> , but referred by Lapworth to the present genus and cited by Zittel, <i>Paléontologie</i> , Fr. ed., 1883, vol. I, p. 303, as the type of it. An unfigured specimen is in the type series. |
| .....                       |                                                                                                                                                                                                                                     |
| Kenwood, <sup>1</sup> N. Y. |                                                                                                                                                                                                                                     |
| Ballston, N. Y.             | As <i>Graptolithus</i> .                                                                                                                                                                                                            |
| .....                       | " "                                                                                                                                                                                                                                 |
| Kenwood, N. Y.              | Fragment preserving the base.                                                                                                                                                                                                       |
| " "                         | As <i>Graptolithus</i> . Two blocks, the first of which bears also three types of <i>Dicranograptus ramosus</i> H.                                                                                                                  |
| Ballston, N. Y.             | As <i>Graptolithus</i> . This block was indicated by Prof. Hall as bearing the originals of these figures. Not clearly recognized.                                                                                                  |
| Kenwood, N. Y.              | As <i>Graptolithus scalaris</i> Linn. Two individuals imbedded on edge.                                                                                                                                                             |
| " "                         |                                                                                                                                                                                                                                     |
| " "                         | Three specimens showing the base and one long fragment. One shows the film and is the counterpart of the type.                                                                                                                      |
| " "                         | As <i>Graptolithus bicornis</i> H. A small fragment.                                                                                                                                                                                |
| " "                         | " " <i>scalaris</i> Linn. " "                                                                                                                                                                                                       |
| Cincinnati, O.              | Fragments imbedded in same block, except fig. 4. Two unfigured specimens are in the type series.                                                                                                                                    |
| Kenwood, N. Y.              | As <i>Graptolithus</i> . Two fragments.                                                                                                                                                                                             |
| .....                       | " "                                                                                                                                                                                                                                 |
| .....                       | " "                                                                                                                                                                                                                                 |
| .....                       | " "                                                                                                                                                                                                                                 |
| .....                       | " "                                                                                                                                                                                                                                 |
| Kenwood, N. Y.              | " " ( <i>Cænograptus</i> ). Six specimens are referred to these figures. Of the two, however, which are said to be the orig. of fig. 5, p. 511, vol. 3, Pal. N. Y., neither agrees exactly with the figure.                         |

<sup>1</sup> The locality called Norman's Kill in Pal. N. Y., vol. 1, and other early reports is now a part of Kenwood, a suburban portion of the city of Albany, N. Y.

Class HYDROZOA—Continued.

| Geol. Subdiv.  | Cat. No. | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                     | REFERENCE.  |        |      |        |              |
|----------------|----------|--------------------|----------------------------------------------------------------|-------------|--------|------|--------|--------------|
|                |          |                    |                                                                | Work.       | Vol.   | P.   | Pl.    | Figs.        |
| U.             | 1029a    | Type.              | <b>Dicranograptus</b> Hall.<br>arundinaceus. . . . . Hall.     | Pal. N. Y.  | I      | .... | 74     | 8, a         |
| "              | 1031a    | "                  | divaricatus. . . . . Hall.                                     | " "         | 3      | 513  | p. 514 | I, 2         |
| "              | "        | Fig'd.             | " " " " " "                                                    | N. Y. S. M. | 20     | 180  | ....   | 20           |
| "              | 1028a    | Type.              | furcatus. . . . . Hall.                                        | Pal. N. Y.  | I      | 273  | 74     | 3c, n. s.    |
| "              | "        | "                  | " " " " " "                                                    | " "         | I      | 273  | 74     | 4a, b        |
| "              | 1030a    | Gen. and Sp. Type. | ramosus. . . . . Hall.                                         | " "         | I      | 270  | 73     | 4g, h        |
| "              | "        | "                  | " " " " " "                                                    | " "         | I      | 270  | 73     | 3a-c, e      |
| "              | "        | "                  | " " " " " "                                                    | Can. O. R.  | Dec. 2 | .... | A      | 3f, g, h     |
| "              | 1027     | Type.              | sextans. . . . . Hall.                                         | N. Y. S. M. | 20     | ...  | 2      | I8-20        |
| Tr.            | 867      | "                  | <b>Dictyonema</b> Hall.<br>neenah. . . . . Hall.<br>Whitfield. | Pal. N. Y.  | I      | 273  | 74     | I8-20        |
| U.             | 1024a    | "                  | <b>Didymograptus</b> McCoy.<br>serratulus. . . . . Hall.       | Geol. Wis.  | I86I   | 17   |        | 3a, b, d, e  |
| "              | 1076     | "                  | subtenuis. . . . . Hall.                                       | Mem. A. M.  | I      | 47   | 5      |              |
| Tr.            | 634      | "                  | <b>Diplograptus</b> McCoy.<br>amplexicaulis. . . . . Hall.     | Pal. N. Y.  | I      | 274  | 74     | I3           |
| U. ?           | 1040     | Fig'd.             | " " " " " "                                                    | Am. P. F.   | ....   | 244  | ....   | 5a, b        |
| " ?            | 1040     | "                  | " " " " " "                                                    | Pal. N. Y.  | I      | 272  | 74     | 2c, d        |
| " ?            | 1040     | "                  | " " " " " "                                                    | " "         | I      | 79   | 26     | I Ia, b      |
| " ?            | 1040     | "                  | " " " " " "                                                    | " "         | I      | 265  | 72     | Ia-c         |
| "              | 1040     | "                  | " " " " " "                                                    | " "         | I      | 265  | 72     | If, g        |
| "              | 1040     | "                  | " " " " " "                                                    | " "         | I      | 265  | 72     | Ih, i        |
| Tr.            | 634      | Type.              | " " " " " "                                                    | " "         | I      | 265  | 72     | Ik, l        |
| U.             | 1033     | "                  | angustifolius. . . . . Hall.                                   | N. Y. S. M. | 20     | .... | 3      | 6, 7         |
| "              | 1038     | Fig'd.             | ciliatus (Emmons). . . Hall.                                   | Pal. N. Y.  | 3      | 515  | ....   | I, 2         |
| "              | "        | "                  | " " " " " ? " "                                                | N. Y. S. M. | I3     | 59   | ....   | I, 2         |
| "              | 1032     | "                  | marcidus. . . . . Hall.                                        | Can. O. R.  | Dec. 2 | .... | B      | I4, I5       |
| "              | 1034     | Type.              | mucronatus. . . . . "                                          | N. Y. S. M. | 20     | ...  | I      | I4, I5       |
| "              | 1092     | "                  | peosta. . . . . "                                              | Can. O. R.  | Dec. 2 | ...  | B      | I6, enl. x 6 |
| "              | 1036     | Fig'd.             | pristis (Hisinger)? . . Hall.                                  | N. Y. S. M. | 20     | .... | I      | I6, "        |
| "              | 1036     | "                  | " " " " " "                                                    | Pal. N. Y.  | 3      | 508  | ....   | 6, enl. x 3  |
| "              | 1036     | "                  | " " " " " "                                                    | Can. O. R.  | Dec. 2 | .... | B      | I8, " x 6    |
| "              | 1036     | "                  | " " " " " "                                                    | N. Y. S. M. | 20     | .... | I      | I8, " "      |
| "              | 1036     | "                  | " " " " " "                                                    | Pal. N. Y.  | I      | 268  | 73     | Ia-d         |
| "              | 1041     | "                  | " " " " " "                                                    | Geol. Wis.  | I86I   | 17   | ....   | ....         |
| H. R. (U. ?)   | 1093     | Type.              | putillus. . . . . Hall.                                        | Mem. A. M.  | I      | 47   | 5      | I2, enl. x 6 |
| Hoosic Slates. | 424      | Fig'd.             | secalinus (Eaton). . . Hall.                                   | Pal. N. Y.  | I      | 265  | 72     | Id, e        |
| U.             | 1039     | Type.              | spinulosus. . . . . Hall.                                      | " "         | 3      | 517  | ....   | Im, n        |
| "              | 1037     | "                  | Whitfieldi. . . . . Hall.                                      | " "         | I3     | 60   | p. 6I  | I o, p       |
| "              | "        | "                  | " " " " " "                                                    | Pal. N. Y.  | 3      | 516  | ....   | 2b, b, b     |
| "              | "        | "                  | " " " " " "                                                    | N. Y. S. M. | I3     | 60   | ...    | 2e, n. s.    |
| "              | "        | "                  | " " " " " "                                                    | Can. O. R.  | Dec. 2 | 36   | ...    | 3I, "        |
| "              | "        | "                  | " " " " " "                                                    | N. Y. S. M. | 20     | 205  | ...    | 33, "        |
| "              | "        | "                  | " " " " " "                                                    | Pal. N. Y.  | 3      | 507  | ....   | I-3          |
| "              | "        | "                  | " " " " " "                                                    | Can. O. R.  | Dec. 2 | .... | B      | 6-II         |
| "              | "        | "                  | " " " " " "                                                    | N. Y. S. M. | 20     | .... | I      | 6-II         |



| LOCALITY.                | REMARKS.                                                                                                             |
|--------------------------|----------------------------------------------------------------------------------------------------------------------|
| Turin, N. Y.             | As <i>Graptolithus</i> . Not described. Its characters are not distinctive enough for description.                   |
| .....                    | As <i>Graptolithus</i> .                                                                                             |
| Kenwood, N. Y.           | “ “ Two other unfigured individuals are in type series.                                                              |
| “ “                      | As type of <i>Graptolithus sextans</i> H. Small fragment.                                                            |
| “ “                      | As <i>Graptolithus</i> . On slab with a type of <i>D. sextans</i> .                                                  |
| “ “                      | “ “ Individual shows the two branches crossed.                                                                       |
| “ “                      | “ “ Five specimens on three slabs, one of which bears a type of <i>Climacogr. bicornis</i> .                         |
| “ “                      | As <i>Graptolithus</i> . Fig. is incorr. Spec. is composed of two indiv.                                             |
| “ “                      | As <i>Climacogr.</i> (s. g. <i>Dicranogr.</i> ) Two individuals.                                                     |
| “ “                      | “ <i>Graptolithus</i> . Two branching fragments on a block and another on block with a type of <i>D. furcatus</i> H. |
| Appleton, Wis.           | A large frond, imbedded.                                                                                             |
| Kenwood, N. Y.           | As <i>Graptolithus</i> . Fragment on block with next specimen.                                                       |
| .....                    | Name proposed by Prof. Hall.                                                                                         |
| Kenwood, N. Y.           | As <i>G. tenuis</i> Portl. A fragment on block with preceding.                                                       |
| Middleville, N. Y.       | As <i>Graptolithus</i> . Several stipes on limestone.                                                                |
| Turin, N. Y.             | “ “ <i>pristis</i> His. Two fragments on one block.                                                                  |
| Lorraine, N. Y.          | “ “ “ “                                                                                                              |
| Near Collinsville, N. Y. | “ “ “ “                                                                                                              |
| Oxtungo Creek, N. Y.     | “ “ “ “                                                                                                              |
| Middleville, N. Y.       | “ “ A single stipe, imbedded.                                                                                        |
| .....                    | “ “ Associated with several fragments of same species.                                                               |
| Kenwood, N. Y.           | An unfigured specimen is in the type series.                                                                         |
| “ “                      | As <i>Graptolithus</i> . Two germs, one with long midrib and radicles.                                               |
| “ “                      | A discoid germ not referred to a species by Prof. Hall.                                                              |
| “ “                      | A germ not referred to a species by Prof. Hall.                                                                      |
| “ “                      | As <i>Graptolithus</i> . Three fragments, imbedded.                                                                  |
| .....                    | “ “ ( <i>Diplograptus</i> ).                                                                                         |
| Maquoketa Creek, Ia.     | A distended fragment, imbedded.                                                                                      |
| Oxtungo Creek, N. Y.     | As <i>Graptolithus</i> . Distinct from Kenwood form?                                                                 |
| Kenwood (?), N. Y.       | “ “                                                                                                                  |
| Nr. Albany, N. Y. (Hall) | “ “ Orig. surv. label on spec. reads “N. W. cor. Columbia Co.”                                                       |
| Oxtungo Creek, N. Y.     | “ type of <i>Grapt. secalinus</i> . Specimen indicated by Prof. Hall as the one from which the figures were made.    |
| “ “                      | As a type of <i>Grapt. bicornis</i> .                                                                                |
| .....                    | As <i>Graptolithus</i> ( <i>Diplograptus</i> ).                                                                      |
| Near Dubuque, Iowa.      | A distended, imbedded fragment, part of which was figured.                                                           |
| Hoosic Falls, N. Y.      | As <i>Graptolithus</i> . Is same as <i>Diplogr. simplex</i> Emmons.                                                  |
| .....                    | “ “                                                                                                                  |
| Kenwood, N. Y.           | “ “ A small fragment.                                                                                                |
| .....                    | “ “                                                                                                                  |
| .....                    | “ “                                                                                                                  |
| .....                    | “ “                                                                                                                  |
| Kenwood, N. Y.           | “ “ A very perfect, isolated individual.                                                                             |
| .....                    | Without reference to species.                                                                                        |
| .....                    | As <i>Graptolithus</i> . Fig. 7 is fr. counterpart of fig. 2 in Pal. N. Y., 3.                                       |
| Kenwood, N. Y.           | “ “ Four stipes showing germ sacs and one showing the macerated remains of the sacs.                                 |

Class HYDROZOA—Continued.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.         | REFERENCE.  |        |      |        |          |
|---------------|----------|--------------------|------------------------------------|-------------|--------|------|--------|----------|
|               |          |                    |                                    | Work.       | Vol.   | P.   | Pl.    | Figs.    |
| U.            | 1021a    | Type.              | <b>Graptolithus</b> Linn.          |             |        |      |        |          |
|               |          |                    | <i>amplexicaulis</i> .....         |             |        |      |        |          |
|               |          |                    | <i>angustifolius</i> .....         |             |        |      |        |          |
|               |          |                    | <i>arundinaceus</i> .....          |             |        |      |        |          |
|               |          |                    | <i>bicornis</i> .....              |             |        |      |        |          |
|               |          |                    | “.....                             |             |        |      |        |          |
|               |          |                    | “.....                             |             |        |      |        |          |
|               |          |                    | <i>ciliatus</i> .....              |             |        |      |        |          |
|               |          |                    | <i>divaricatus</i> .....           |             |        |      |        |          |
|               |          |                    | <i>divergens</i> .....             |             |        |      |        |          |
|               |          |                    | <i>furcatus</i> .....              |             |        |      |        |          |
|               |          |                    | <i>gracilis</i> .....              |             |        |      |        |          |
|               |          |                    | ? <i>lævis</i> ... ..Hall.         | Pal. N. Y.  | I      | 274  | 74     | 7, n. s. |
|               |          |                    | <i>Milesi</i> .....                |             |        |      |        |          |
|               |          |                    | <i>mucronatus</i> .....            |             |        |      |        |          |
|               |          |                    | <i>peosta</i> .....                |             |        |      |        |          |
|               |          |                    | <i>pristis</i> .....               |             |        |      |        |          |
|               |          |                    | “.....                             |             |        |      |        |          |
| U.            | 1022a    | Fig'd.             | <i>putillus</i> .....              |             |        |      |        |          |
|               |          |                    | <i>ramosus</i> .....               |             |        |      |        |          |
|               |          |                    | <i>scalaris</i> (Linn.)... ..Hall. | Pal. N. Y.  | I      | 271  | 73     | 4e, f    |
|               |          |                    | <i>scalaris</i> .....              |             |        |      |        |          |
|               |          |                    | “.....                             |             |        |      |        |          |
|               |          |                    | <i>secalinus</i> .....             |             |        |      |        |          |
|               |          |                    | “.....                             |             |        |      |        |          |
|               |          |                    | <i>serratulus</i> .....            |             |        |      |        |          |
|               |          |                    | <i>sextans</i> .....               |             |        |      |        |          |
|               |          |                    | “.....                             |             |        |      |        |          |
|               |          |                    | <i>spinulosus</i> .....            |             |        |      |        |          |
|               |          |                    | <i>subtenuis</i> .....             |             |        |      |        |          |
|               |          |                    | <i>tenuis</i> .....                |             |        |      |        |          |
|               |          |                    | <i>Whitfieldi</i> .....            |             |        |      |        |          |
|               |          |                    | germs.....                         |             |        |      |        |          |
| ?             | 433      | Type.              | <b>Loganograptus</b> Hall.         |             |        |      |        |          |
|               |          |                    | <i>Milesi</i> .....Hall.           | Geol. Vt.   | 1, 2   | 372  | 12     | 2-4      |
|               |          |                    | <b>Oldhamia</b> Forbes.            |             |        |      |        |          |
|               |          |                    | ? <i>fruticosa</i> .....           |             |        |      |        |          |
| U.            | 1050     | Type.              | <b>Rastrites</b> Barrande.         |             |        |      |        |          |
|               |          |                    | <i>Barrandii</i> .....Hall.        | Pal. N. Y.  | 3      | 522  | ....   | 1, 2     |
|               |          |                    | “.....                             | N. Y. S. M. | 13     | 64   | ....   | 1, 2     |
|               |          |                    | “.....                             | Can. O. R.  | Dec. 2 | 26   | ....   | 28       |
|               |          |                    | “.....                             | N. Y. S. M. | 20     | 184  | ....   | 25       |
| B. R.         | 590<br>5 | Gen. and Sp. Type. | <b>Stromatocerium</b> Hall.        |             |        |      |        |          |
|               |          |                    | <i>rugosum</i> .....Hall.          | Pal. N. Y.  | I      | 48   | 12     | 2, 2a    |
| U.            | 1047     | Type.              | <b>Thamnograptus</b> Hall.         |             |        |      |        |          |
|               |          |                    | <i>capillaris</i> .....Hall.       | “ “         | 3      | 520  | ....   | 3        |
|               |          |                    | “.....                             | N. Y. S. M. | 13     | 63   | ....   | 3        |
|               |          |                    | <i>typus</i> .....Hall.            | Pal. N. Y.  | 3      | 519  | ....   | 1, n. s. |
|               |          |                    | “.....                             | N. Y. S. M. | 13     | 62   | ....   | 1, “     |
|               |          |                    | “.....                             | Pal. N. Y.  | 3      | 519  | p. 520 | 2, “     |
|               |          |                    | “.....                             | N. Y. S. M. | 13     | 62   | p. 63  | 2, “     |
|               |          |                    | “.....                             | Can. O. R.  | Dec. 2 | 17   | ....   | 24, “    |
|               |          |                    | “.....                             | N. Y. S. M. | 20     | 184  | ....   | 26, “    |
|               |          |                    | Genus ? sp. ?.....Hall.            | Pal. N. Y.  | 3      | 508  | ....   | 4a, b    |
|               |          |                    | “ “.....                           | “ “         | 3      | 508  | ....   | 7, n. s. |
|               |          |                    | “.....                             | Can. O. R.  | Dec. 2 | .... | B      | 19       |
|               |          |                    | “.....                             | N. Y. S. M. | 20     | .... | I      | 19       |
|               |          |                    |                                    |             |        |      |        |          |
|               |          |                    |                                    |             |        |      |        |          |



| LOCALITY.        | REMARKS.                                                                 |
|------------------|--------------------------------------------------------------------------|
| .....            | See <i>Diplograptus</i> .                                                |
| .....            | “ “                                                                      |
| .....            | “ <i>Dicranograptus</i> .                                                |
| .....            | “ <i>Climacograptus</i> .                                                |
| .....            | “ “ <i>parvus</i> .                                                      |
| .....            | “ “ <i>pristis</i> .                                                     |
| .....            | “ <i>Diplograptus</i> .                                                  |
| .....            | “ <i>Dicranograptus</i> .                                                |
| .....            | “ <i>Amphigraptus</i> .                                                  |
| .....            | “ <i>Dicranograptus</i> .                                                |
| .....            | “ <i>Cænograptus</i> .                                                   |
| Turin, N. Y.     | More of the stipe has been uncovered since the figure was made.          |
| .....            | See <i>Loganograptus</i> .                                               |
| .....            | “ <i>Diplograptus</i> .                                                  |
| .....            | “ “                                                                      |
| .....            | “ “ <i>amplexicaulis</i> .                                               |
| .....            | “ “                                                                      |
| .....            | “ <i>Dicranograptus</i> .                                                |
| Kenwood, N. Y.   | Small fragment. Probably is <i>G. sagittarius</i> flattened on the face. |
| .....            | See <i>Climacograptus bicornis</i> .                                     |
| .....            | “ “ <i>parvus</i> .                                                      |
| .....            | “ <i>Diplograptus</i> .                                                  |
| .....            | “ “ <i>pristis</i> .                                                     |
| .....            | “ <i>Didymograptus</i> .                                                 |
| .....            | “ <i>Dicranograptus</i> .                                                |
| .....            | “ “ <i>divaricatus</i> .                                                 |
| .....            | “ <i>Diplograptus</i> .                                                  |
| .....            | “ <i>Didymograptus</i> .                                                 |
| .....            | “ “ <i>subtenuis</i> .                                                   |
| .....            | “ <i>Diplograptus</i> .                                                  |
| .....            | “ “ <i>ciliatus, marcidus</i> and <i>Whitfieldi</i> .                    |
| Monkton, Vt.     | As <i>Graptolithus</i> . Two fronds imbedded in a boulder.               |
| .....            | See <i>Callithamnopsis</i> under Algæ.                                   |
| Kenwood, N. Y.   | A single stipe with branchlets, imbedded.                                |
| Watertown, N. Y. | Imbedded individual showing weathered longitudinal section.              |
| Kenwood, N. Y.   | A stipe with branchlets, imbedded.                                       |
| “ “              | “ “ “ “ “                                                                |
| “ “              | “ “ “ “ “                                                                |
| “ “              | On slab with several species of graptolites.                             |
| “ “              | On block with <i>Dicranograptus divaricatus</i> .                        |

Subkingdom ECHINODERMATA.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                    | REFERENCE.  |       |       |       |                     |
|---------------|----------|-------------------|---------------------------------------------------------------|-------------|-------|-------|-------|---------------------|
|               |          |                   |                                                               | Work.       | Vol.  | P.    | Pl.   | Figs.               |
|               |          |                   | <b>Asterias</b> Lamarck.<br><i>matutinus</i> .....            | .....       | ..... | ..... | ..... | .....               |
| Tr.           | 661      | Type.             | <b>Palæaster</b> Hall.<br><i>matutinus</i> ..... <i>Hall.</i> | Pal. N. Y.  | I     | 91    | 29    | 5a, b               |
| H. R.         | 1195     | "                 | <i>Schæfferi</i> ..... <i>Hall.</i>                           | N. Y. S. M. | 20    | 284   | 9     | 1, <i>ven. side</i> |

Class CRINOIDEA.

|       |                  |                    |                                                                               |             |       |       |       |                      |
|-------|------------------|--------------------|-------------------------------------------------------------------------------|-------------|-------|-------|-------|----------------------|
|       |                  |                    | <b>Actinocrinus</b> Miller.<br><i>tenuiradiatus</i> .....                     | .....       | ..... | ..... | ..... | .....                |
|       |                  |                    | ? sp. ....                                                                    | Pal. N. Y.  | I     | 18    | 4     | 10                   |
| Tr.   | 654              | Type.              | <b>Cupulocrinus</b> d'Orbigny.<br><i>heterocostalis</i> ..... <i>Hall.</i>    | Pal. N. Y.  | I     | 85    | 28    | 3d-f                 |
| Tr.   | $\frac{650}{3}$  | Type.              | <b>Dendrocrinus</b> Hall.<br><i>alternatus</i> ..... <i>Hall.</i>             | Pal. N. Y.  | I     | 83    | 28    | 1a-d                 |
| "     | $\frac{650}{2}$  | "                  | "....."                                                                       | " "         | I     | 83    | 28    | 1e                   |
| "     | $\frac{650}{1}$  | "                  | "....."                                                                       | " "         | I     | 83    | 28    | 1f                   |
| H. R. | 1180             | "                  | <i>caduceus</i> ... .. <i>Hall.</i>                                           | N. Y. S. M. | 24    | 208   | 5     | 7, 8                 |
| Tr.   | $\frac{649}{1}$  | "                  | <i>gracilis</i> ..... <i>Hall.</i>                                            | Pal. N. Y.  | I     | 84    | 28    | 2a, b                |
| H. R. | $\frac{656}{2}$  | Type.              | <b>Ectenocrinus</b> S. A. Miller.<br><i>simplex</i> ..... <i>Hall.</i>        | Pal. N. Y.  | I     | 280   | 76    | 2a, d                |
| "     | "                | "                  | "....."                                                                       | N. Y. S. M. | 24    | ...   | 5     | 11, 12               |
| "     | $\frac{1176}{1}$ | "                  | <b>Heterocrinus</b> Hall.<br><i>exilis</i> ..... <i>Hall.</i>                 | " "         | 24    | 213   | 5     | 16, <i>side</i> X 3  |
| "     | 1117             | "                  | ? <i>gracilis</i> . .... <i>Hall.</i>                                         | Pal. N. Y.  | I     | 280   | 76    | 3a, b                |
| "     | $\frac{1116}{3}$ | Gen. and Sp. Type. | <i>heterodactylus</i> ..... <i>Hall.</i>                                      | " "         | I     | 279   | 76    | 1a, <i>n. s.</i>     |
| "     | $\frac{1116}{2}$ | "                  | "....."                                                                       | " "         | I     | 279   | 76    | 1e                   |
| "     | $\frac{1116}{1}$ | "                  | "....."                                                                       | " "         | I     | 279   | 76    | 1i-o                 |
| "     | $\frac{1173}{1}$ | Type.              | <i>juvenis</i> ..... <i>Hall.</i><br>( <i>Iocrinus</i> ) <i>polyxo</i> .....  | N. Y. S. M. | 24    | 212   | 5     | 9, 10                |
|       |                  |                    | <i>simplex</i> .....                                                          | .....       | ..... | ..... | ..... | .....                |
| H. R. | 1182             | Gen. and Sp. Type. | <b>Glyptocrinus</b> Hall.<br><i>decadactylus</i> ..... <i>Hall.</i>           | Pal. N. Y.  | I     | 281   | 77    | 1a, <i>side</i> .    |
| "     | "                | "                  | "....."                                                                       | " "         | I     | 281   | 77    | 1b-f, B.             |
| "     | "                | "                  | "....."                                                                       | " "         | I     | 281   | 78    | 1b-e, o, p, r        |
| "     | "                | "                  | "....."                                                                       | " "         | I     | 281   | 78    | 1f-h                 |
| "     | "                | "                  | "....."                                                                       | " "         | I     | 281   | 78    | 1i-k                 |
| "     | $\frac{1118}{2}$ | "                  | "....."                                                                       | " "         | I     | 281   | 78    | 1s, <i>n. s.</i>     |
| "     | "                | "                  | "....."                                                                       | " "         | I     | 281   | 78    | 1t ( <i>first</i> )  |
| "     | "                | "                  | "....."                                                                       | " "         | I     | 281   | 78    | 1t ( <i>second</i> ) |
| "     | 1182             | "                  | "....."                                                                       | " "         | 1     | 281   | 78    | 1u                   |
|       |                  |                    | <i>Nealli</i> .....                                                           | .....       | ..... | ..... | ..... | .....                |
| "     | $\frac{1178}{2}$ | Fig'd.             | <b>Iocrinus</b> Hall.<br><i>subcrassus</i> ( <i>M. &amp; W.</i> ) <i>Hall</i> | N. Y. S. M. | 24    | 212   | 5     | 1, <i>side</i> .     |
| "     | "                | "                  | "....."                                                                       | " "         | 24    | 212   | 5     | 2, "                 |
|       |                  |                    | <b>Poteriocrinus</b> Miller.<br><i>alternatus</i> .....                       | .....       | ..... | ..... | ..... | .....                |
|       |                  |                    | ( <b>Dendrocr.</b> ) <i>caduceus</i> ...                                      | .....       | ..... | ..... | ..... | .....                |
|       |                  |                    | <i>gracilis</i> .....                                                         | .....       | ..... | ..... | ..... | .....                |



Class ASTEROIDEA.

| LOCALITY.                                 | REMARKS.                                                                                                                                                                                                  |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                                     | See <i>Palæaster</i> .                                                                                                                                                                                    |
| Trenton Falls, N. Y.<br>Cincinnati, O.    | As <i>Asterias</i> . Imbedded individual.<br>A nearly entire individual, imbedded.                                                                                                                        |
| .....                                     | See <i>Palæocystites</i> .                                                                                                                                                                                |
| .....                                     | “ “ sp.                                                                                                                                                                                                   |
| Middleville, N. Y.                        | As generic type of <i>Scyphocrinus</i> , but the name was pre-occupied.<br>Isolated body with broken arms and no stem.                                                                                    |
| Turin, N. Y.<br>Carlisle, Pa.             | As <i>Poteriocrinus</i> . Weathered individual on limestone.<br>“ “ Single pelvic plate on limestone.                                                                                                     |
| Middleville, N. Y.                        | “ “ Fragment of column imbedded.                                                                                                                                                                          |
| Near Lebanon, O.                          | “ “ ( <i>Dendrocr.</i> ). Two calices and an unfigured<br>one form the type series.                                                                                                                       |
| Middleville, N. Y.                        | “ “ Imprint ; body lost.                                                                                                                                                                                  |
| Cincinnati, O.<br>“ “                     | As <i>Heterocrinus</i> . A small calyx with arms nearly entire.<br>“ “ “ large “ “ “                                                                                                                      |
| “ “                                       | A small calyx with arms nearly entire.                                                                                                                                                                    |
| Snake Hill, Saratoga<br>Co., N. Y.<br>“ “ | Impression of a column in slate. Species rejected by Wachsmuth<br>and Springer, because founded on column only.<br>Small individual imbedded. Head has been lost, column remains.                         |
| Booneville, N. Y.                         | Slab bears several stems of this and other species.                                                                                                                                                       |
| Pulaski, N. Y.                            | Slab of slate bearing many imprints of crinoid plates, etc. [This<br>species has been made the type of <i>Stenocrinus</i> by Wachsmuth and<br>Springer, <i>vid.</i> Rev. of Palæocrinoidea, III, p. 207.] |
| Lebanon, O.                               | Detached calyx with arms and short piece of column.                                                                                                                                                       |
| .....                                     | See <i>Iocrinus subcrassus</i> .                                                                                                                                                                          |
| .....                                     | “ <i>Ectenocrinus</i> .                                                                                                                                                                                   |
| Cincinnati, O.<br>“ “                     | Two young individuals imbedded in contact. Arms fragmentary.                                                                                                                                              |
| “ “                                       | Entire calyx with arms complete to beyond where free.                                                                                                                                                     |
| “ “                                       | Six fragments of stems corresponding with the figures.                                                                                                                                                    |
| “ “                                       | Rather small stem, imbedded.                                                                                                                                                                              |
| “ “                                       | Six detached column plates of various form referred here.                                                                                                                                                 |
| Booneville, N. Y.                         | A slab bearing several stems referred to this species.                                                                                                                                                    |
| “ “                                       | Large stem, imbedded, associated with other stems, etc.                                                                                                                                                   |
| “ “                                       | A large stem, imbedded, fragment.                                                                                                                                                                         |
| Cincinnati, O.                            | Fragment of a large stem, imbedded.                                                                                                                                                                       |
| .....                                     | See <i>Retiocrinus</i> .                                                                                                                                                                                  |
| Cincinnati, O.<br>“ “                     | As type of <i>Heterocr.</i> ( <i>Iocr.</i> ) <i>polyxo</i> Hall. Rather large calyx.<br>“ “ “ “ Imbedded, nearly entire.                                                                                  |
| .....                                     | See <i>Dendrocrinus</i> .                                                                                                                                                                                 |
| .....                                     | “ “                                                                                                                                                                                                       |
| .....                                     | “ “                                                                                                                                                                                                       |

Class CRINOIDEA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                 | REFERENCE.  |      |     |     |                |
|---------------|------------------|-------------------|------------------------------------------------------------|-------------|------|-----|-----|----------------|
|               |                  |                   |                                                            | Work.       | Vol. | P.  | Pl. | Figs.          |
| H. R.         | $\frac{1183}{2}$ | Type.             | <b>Retiocrinus</b> Billings.<br>Nealli.....Hall.           | N. Y. S. M. | 24   | 206 | 5   | 18, 19         |
| Tr.           | $\frac{652}{1}$  | Gen. and Sp.Type. | <b>Schizocrinus</b> Hall.<br>nodosus.....Hall.             | Pal. N. Y.  | I    | 81  | 27  | 1c, g, k, l, n |
| "             | 651              | Type.             | striatus.....Hall.                                         | " "         | I    | 316 | 28  | 4a-c           |
| Ch.           | 519              | Fig'd.            | <i>Scyphocrinus</i> Hall. ....<br>Crinoid plates.....Hall. | Pal. N. Y.  | I    | 17  | 4   | 6b, b          |
| Be.           | 572              | "                 | " column ..... "                                           | " "         | I    | 51  | 12  | 9              |

Class CYSTOIDEA.

|       |                  |                   |                                                                                                              |                          |         |            |         |                         |
|-------|------------------|-------------------|--------------------------------------------------------------------------------------------------------------|--------------------------|---------|------------|---------|-------------------------|
| H. R. | 1194             | Fig'd.            | <b>Agelacrinus</b> Vanuxem.<br>s. g. <b>Lepidodiscus</b> M. & W.<br>cincinnatensis ( <i>Ræm.</i> ) <i>H.</i> | N. Y. S. M.              | 24      | 214        | 6       | 7, top X $2\frac{1}{2}$ |
| "     | 1193             | Type.             | pileus.....Hall.                                                                                             | " "                      | 24      | 214        | 6       | 10, pt. X 3             |
| "     | 1192             | "                 | s. g. <b>Streptaster</b> Hall.<br>vorticellatus.....Hall.                                                    | " "                      | 24      | 215        | 6       | 11, 12                  |
| Tr.   | 887              | "                 | <b>Cyclocystoides</b> B. & S.<br>anteceptus.....Hall.                                                        | N. Y. S. M.              | 24      | 219        |         |                         |
| "     | 662              | "                 | "<br>Salteri .....Hall.                                                                                      | Lake Sup.<br>N. Y. S. M. | 2<br>24 | 209<br>218 | 25<br>6 | 4b<br>16, enl.          |
|       |                  |                   | <b>Echino-encrinites</b> Meyer.<br><i>anatiformis</i> .. .. .                                                | .....                    | .....   | .....      | .....   | .....                   |
| H. R. | $\frac{1191}{1}$ | Type.             | <b>Hemicystites</b> Hall.<br>stellatus.....Hall.                                                             | N. Y. S. M.              | 24      | 215        | 6       | 5, top X 6              |
| Tr.   | 658              | "                 | <b>Homocystites</b> Barrande.<br>anatiformis.....Hall.                                                       | Pal. N. Y.               | I       | 89         | 29      | 4a-c                    |
| "     | "                | "                 | " .....                                                                                                      | " "                      | I       | 89         | 29      | 4d, d <sup>1</sup>      |
| "     | "                | Fig'd.            | " ( <i>Hall</i> )..Frech.                                                                                    | Leth. Geog.              | ?       | ?          | ?       | ?, enl. X 2             |
| "     | 659              | "                 | " var. Logani<br>( <i>Bill.</i> ) Fr.                                                                        | " "                      | ?       | ?          | ?       | ?, 3 enl's              |
| H. R. | 1190a            | Type.             | <b>Lichenocrinus</b> Hall.<br>crateriformis.....Hall.                                                        | N. Y. S. M.              | 24      | 217        | .....   | .....                   |
| "     | 1190             | Gen. and Sp.Type. | Dyeri.....Hall.                                                                                              | " "                      | 24      | 216        | 7       | 4                       |
| Ch.   | 519              | Type.             | <b>Palæocystites</b> Billings.<br>tenuiradiatus .. .. .Hall.                                                 | Pal. N. Y.               | I       | 18         | 4       | 9, n. s.                |
| "     | 520              | Fig'd.            | ? sp.....Hall.                                                                                               | " "                      | I       | 18         | 4       | 10                      |

MOLLUSCOIDEA.

|     |                 |                   |                                                       |            |   |     |    |          |
|-----|-----------------|-------------------|-------------------------------------------------------|------------|---|-----|----|----------|
| Tr. | $\frac{889}{1}$ | Type.             | <b>Clathropora</b> Hall.<br>flabellata.....Hall.      | Lake Sup.  | 2 | 207 | 24 | 2a, b    |
| Ch. | 525             | "                 | glomerata.....Hall.                                   | Pal. N. Y. | I | 17  | 4  | 5, n. s. |
| Tr. | $\frac{665}{1}$ | Gen. and Sp.Type. | <b>Enallopora</b> d'Orbigny.<br>perantiqua .....Hall. | " "        | I | 76  | 26 | 5a, b    |



| LOCALITY.             | REMARKS.                                                                                                                                                                                                  |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Near Lebanon, O.      | As <i>Glyptocrinus</i> . Two bodies as represented. Another, not figured, is in the type series.                                                                                                          |
| Middleville, N. Y.    | A tentaculated finger and five fragments of columns.                                                                                                                                                      |
| .....                 | Body and part of column.                                                                                                                                                                                  |
| .....                 | See <i>Cupulocrinus</i> . This name was pre-occupied.                                                                                                                                                     |
| Chazy, N. Y.          | As types of <i>Streptelasma expansum</i> . Imbedded in block with <i>Palæocystites tenuiradiatus</i> , fig. 9, pl. iv.                                                                                    |
| Watertown, N. Y.      | Imbedded. Two annulations have been broken off since the fig. was made. Ref. in book to Black Riv. grp., but the block bears Prof. Hall's loc. num. for Birdseye, and possesses the charac. of that rock. |
| Cincinnati, O.        | A vertically compressed individual, imbedded.                                                                                                                                                             |
| .....                 | Individual crushed so as to show three arms and the space between two.                                                                                                                                    |
| .....                 | Somewhat crushed individual, imbedded.                                                                                                                                                                    |
| Escañaba River, Mich. | Without name. An incomplete individual.                                                                                                                                                                   |
| Near Saratoga, N.Y.   | Imbedded.                                                                                                                                                                                                 |
| .....                 | See <i>Homocystites</i> :                                                                                                                                                                                 |
| Cincinnati, O.        | As <i>Agelacrinus</i> ( <i>Hemicystites</i> ). Small individual on <i>Rafinesquina alternata</i> .                                                                                                        |
| Turin, N. Y.          | As <i>Echino-encrinites</i> . Parts of two individuals in same slab.                                                                                                                                      |
| .....                 | ..... Two worn individuals in slab with others.                                                                                                                                                           |
| .....                 | Lower part of calyx.                                                                                                                                                                                      |
| Brighton, Ont.        | Calyx with arms and stem. This and the preceding are fig'd in a revised edition of F. Roemer's <i>Lethæa Geognostica</i> not yet published.                                                               |
| Cincinnati, O.        | A small individual. In type series, but not figured.                                                                                                                                                      |
| .....                 | Rather large individual, probably somewhat weathered. Two unfigured individuals are in type series.                                                                                                       |
| Chazy, N. Y.          | As <i>Actinocrinus</i> . A number of plates imbedded in block with originals of figs. 6b, b, same plate.                                                                                                  |
| .....                 | As <i>Actinocrinus</i> . Single summit-plate imbedded. Two figures.                                                                                                                                       |

Class POLYZOA.

|                       |                                                                           |
|-----------------------|---------------------------------------------------------------------------|
| Escañaba River, Mich. | A very large frond, imbedded.                                             |
| Granville, Vt.        | As <i>Stictopora</i> . A considerable surface, of which a part was fig'd. |
| Middleville, N. Y.    | As <i>Gorgonia</i> ? An imbedded frond, of which a part has been lost.    |





Class POLYZOA—*Continued.*

| LOCALITY.          | REMARKS.                                                                                                                                                                                                                                                                                  |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Middleville, N. Y. | Pre-occupied by <i>Ptilodictya</i> .<br>The upper portion of this spec. is a fragm. of a <i>Cyrtoceras</i> coated<br>with a bryozoan, not <i>Ptilodictya</i> . Below this is a piece of crinoid<br>stem, and then an organic fragment of undetermined nature.<br>See <i>Ptilodictya</i> . |
| " "                | " "                                                                                                                                                                                                                                                                                       |
| Middleville, N. Y. | As generic type of <i>Escharopora</i> . Slender individual, imbedded.                                                                                                                                                                                                                     |
| " "                | As <i>Escharopora</i> . Is specifically distinct from <i>P. recta</i> .                                                                                                                                                                                                                   |
| " "                | See <i>Subretepora</i> .                                                                                                                                                                                                                                                                  |
| " "                | " "                                                                                                                                                                                                                                                                                       |
| " "                | " <i>Bucania punctifrons</i> .                                                                                                                                                                                                                                                            |
| Fort Cassin, Vt.   | A frond, imbedded.                                                                                                                                                                                                                                                                        |
| Middleville, N. Y. | Small individual with several bifurcations.                                                                                                                                                                                                                                               |
| " "                | " " two "                                                                                                                                                                                                                                                                                 |
| Watertown, N. Y.   | " " crust nearly gone.                                                                                                                                                                                                                                                                    |
| Chazy, N. Y.       | Two branches, imbedded, one showing axis, the other the ext. surface.                                                                                                                                                                                                                     |
| " "                | Several branching stems, imbedded.                                                                                                                                                                                                                                                        |
| Watertown, N. Y.   | Many fragments imbedded.                                                                                                                                                                                                                                                                  |
| Chazy, N. Y.       | As <i>Retepora</i> . A small fragment, imbedded.                                                                                                                                                                                                                                          |
| Near Galway, N. Y. | " " Fragment of frond, imbedded.                                                                                                                                                                                                                                                          |
| " "                |                                                                                                                                                                                                                                                                                           |
| " "                | See <i>Camarotæchia</i> .                                                                                                                                                                                                                                                                 |
| " "                | " <i>Triplecia extans</i> .                                                                                                                                                                                                                                                               |
| " "                | " <i>Cyclospira</i> .                                                                                                                                                                                                                                                                     |
| " "                | " <i>Camerella</i> .                                                                                                                                                                                                                                                                      |
| " "                | " <i>Triplecia extans</i> .                                                                                                                                                                                                                                                               |
| " "                | " <i>Rhyncotrema</i> .                                                                                                                                                                                                                                                                    |
| " "                | " <i>Protozyga</i> .                                                                                                                                                                                                                                                                      |
| " "                | " <i>Triplecia</i> .                                                                                                                                                                                                                                                                      |
| " "                | " <i>Parastrophia</i> .                                                                                                                                                                                                                                                                   |
| " "                | " <i>Rhyncotrema increbescens</i> and <i>R. capax</i> .                                                                                                                                                                                                                                   |
| " "                | " <i>Zygospira</i> .                                                                                                                                                                                                                                                                      |
| " "                | " <i>Triplecia</i> .                                                                                                                                                                                                                                                                      |
| " "                | " <i>Camarotæchia</i> .                                                                                                                                                                                                                                                                   |
| " "                | " "                                                                                                                                                                                                                                                                                       |
| " "                | " <i>Zygospira</i> .                                                                                                                                                                                                                                                                      |
| " "                | " <i>Plectorthis</i> .                                                                                                                                                                                                                                                                    |
| " "                | " <i>Camarotæchia</i> .                                                                                                                                                                                                                                                                   |
| " "                | " <i>Triplecia extans</i> .                                                                                                                                                                                                                                                               |
| Fort Cassin, Vt.   | As <i>Streptorhynchus</i> ? Dorsal valve imbedded, right angle wanting.                                                                                                                                                                                                                   |

Class BRACHIOPODA—Continued.

| Geol. Subdiv.            | Cat. No.         | Type or Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.   | REFERENCE.   |          |      |       |                |
|--------------------------|------------------|---------------------|------------------------------|--------------|----------|------|-------|----------------|
|                          |                  |                     |                              | Work.        | Vol.     | P.   | Pl.   | Figs.          |
| Ch.                      | 532              | Type.               | <b>Camarotoëchia</b> H. & C. |              |          |      |       |                |
|                          |                  |                     | altilis.....Hall.            | Pal. N. Y.   | I        | 23   | 4 bis | 9a-d           |
|                          | 530              | "                   | plena.....Hall.              | " "          | I        | 21   | 4 bis | 7c, v. v.      |
|                          | 533              | "                   | ? plicifera.....Hall.        | " "          | I        | 22   | 4 bis | 8c, d          |
| Tr.?                     | 708              | "                   | ? subtrigonalis.....Hall.    | " "          | I        | 145  | 33    | 12a-c          |
| Tr.                      | 696              | Type.               | <b>Camerella</b> Billings.   |              |          |      |       |                |
|                          |                  |                     | circulus.....Hall.           | Pal. N. Y.   | I        | 142  | 33    | 7a-c           |
| H. R.                    | $\frac{1338}{2}$ | Type.               | <b>Crania</b> Retzius.       |              |          |      |       |                |
|                          |                  |                     | lælia.....Hall.              | N. Y. S. M.  | 24       | 220  | 7     | 16, ext. d. v. |
|                          |                  |                     | H. & C.                      | St. G. N. Y. | II       | .... | 6     | 16, "          |
|                          |                  |                     | "                            | Pal. N. Y.   | 8, pt. I | .... | 4H    | I, "           |
| Tr.                      | 908              | "                   | scabiosa.....Hall.           | N. Y. S. M.  | 24       | 220  | 7     | 15, group      |
|                          |                  |                     | H. & C.                      | Pal. N. Y.   | 8, pt. I | 148  | 4H    | 26, "          |
| Tr.                      | 687              | "                   | setigera.....Hall.           | N. Y. S. M.  | 24       | 220  | 7     | 13, 14         |
|                          |                  |                     | H. & C.                      | Pal. N. Y.   | 8, pt. I | 150  | 4H    | 15, 16         |
|                          |                  |                     | trentonensis.....Hall.       | N. Y. S. M.  | 24       | 219  | 7     | 11, 12         |
|                          |                  |                     | H. & C.                      | Pal. N. Y.   | 8, pt. I | 150  | 4H    | 21, 22         |
| Tr.                      | $\frac{713}{1}$  | Fig'd Sp. and G. T. | <b>Cyclospira</b> H. & C.    |              |          |      |       |                |
|                          |                  |                     | bisulcata (Emmons)... H.     | Pal. N. Y.   | I        | 139  | 33    | 3a-e           |
|                          |                  |                     | H. & C.                      | St. G. N. Y. | 13       | 808  | 40    | I-3            |
|                          |                  |                     | "                            | Pal. N. Y.   | 8, pt. 2 | 146  | 54    | 38-40          |
| H. R.                    | $\frac{1339}{2}$ | Type.               | <b>Dalmanella</b> H. & C.    |              |          |      |       |                |
|                          |                  |                     | emacerata.....Hall.          | N. Y. S. M.  | 13       | 121  | ....  | ....           |
|                          |                  |                     | "                            | " "          | 15       | .... | 2     | I, ext. d. v.  |
|                          |                  |                     | H. & C.                      | Pal. N. Y.   | 8, pt. I | .... | 5C    | I, 2           |
| Ft. C. Ca. Tr.           | $\frac{441}{3}$  | Fig'd. Type.        | ? evadne (Bill.). Whitf.     | A. M. N. H.  | I        | 300  | 24    | 8, ext. X 2    |
|                          |                  |                     | Macleodi... Whitfield.       | " "          | 2        | 43   | 7     | I-4            |
|                          |                  |                     | perveta.....Conrad.          | P. A. N. S.  | I        | 333  | ....  | ....           |
|                          |                  |                     | Hall.                        | Pal. N. Y.   | I        | 120  | 32    | 5a-d           |
| Tr.                      | 910              | Type.               | "                            | Geol. Wis.   | I        | 42   | ....  | 7a-d           |
|                          |                  |                     | "                            | St. G. N. Y. | 2        | .... | 34    | 16, d. v.      |
|                          |                  |                     | H. & C.                      | Pal. N. Y.   | 8, pt. I | 205  | 5C    | 12, "          |
|                          |                  |                     | " (Con.).....Hall.           | St. G. N. Y. | 2        | ...  | 34    | 17, 18         |
| Tr.                      | $\frac{690}{3}$  | Fig'd.              | " (Con.)... Hall.            | Pal. N. Y.   | 8, pt. I | 205  | 5C    | 13, 14         |
|                          |                  |                     | H. & C.                      | St. G. N. Y. | 2        | .... | 34    | 24, int.       |
|                          |                  |                     | "                            | " "          | II       | .... | II    | 10, "          |
|                          |                  |                     | "                            | Pal. N. Y.   | 8, pt. I | 205  | 5C    | 10, "          |
| H. R.                    | $\frac{690}{3}$  | Type.               | subæquata.....Conrad.        | P. A. N. S.  | I        | 333  | ....  | ....           |
|                          |                  |                     | Hall.                        | Pal. N. Y.   | I        | 118  | 32    | 2a-d           |
|                          |                  |                     | "                            | Geol. Wis.   | I        | 42   | ....  | I-3            |
|                          |                  |                     | "                            | St. G. N. Y. | 2        | .... | 34    | 19-21          |
| Tr.                      | $\frac{690}{3}$  | Fig'd.              | testudinaria (Dalman) H.     | Pal. N. Y.   | 8, pt. I | 205  | 5C    | 6-8            |
|                          |                  |                     | "                            | Pal. N. Y.   | I        | 117  | 32    | 1a-d           |
|                          |                  |                     | "                            | " "          | I        | 117  | 32    | 1g-k           |
|                          |                  |                     | "                            | " "          | I        | 117  | 32    | 11, d. v.      |
| Tr.                      | $\frac{690}{9}$  | Fig'd Sp. and G. T. | "                            | " "          | I        | 288  | 79    | 4a-c           |
|                          |                  |                     | "                            | St. G. N. Y. | 2        | .... | 34    | I-5            |
|                          |                  |                     | H. & C.                      | " "          | II       | .... | II    | 4, 5           |
|                          |                  |                     | "                            | Pal. N. Y.   | 8, pt. I | 207  | 5B    | 27-31          |
| Tr.                      | $\frac{690}{3}$  | "                   | " (Dalman) Hall.             | St. G. N. Y. | 2        | .... | 34    | 11, int. X 2   |
|                          |                  |                     | H. & C.                      | Pal. N. Y.   | 8, pt. I | 207  | 5B    | 39, "          |
|                          |                  |                     | " (Dalman) Hall.             | St. G. N. Y. | 2        | .... | 34    | 12             |
|                          |                  |                     | H. & C.                      | Pal. N. Y.   | 8, pt. I | 207  | 5B    | 38             |
| Tr.                      | $\frac{690}{3}$  | "                   | " (Dalman) Hall.             | St. G. N. Y. | 2        | .... | 34    | 12             |
|                          |                  |                     | H. & C.                      | Pal. N. Y.   | 8, pt. I | 207  | 5B    | 38             |
| <b>Delthyris</b> Dalman. |                  |                     |                              |              |          |      |       |                |
| biforata, var. lynx..... |                  |                     |                              |              |          |      |       |                |



| LOCALITY.                      | REMARKS.                                                                                                     |
|--------------------------------|--------------------------------------------------------------------------------------------------------------|
| Chazy, N. Y.                   | As <i>Atrypa</i> . Entire individual.                                                                        |
| " "                            | " "                                                                                                          |
| " "                            | " " Entire, somewhat compressed.                                                                             |
| Turin, N. Y.                   | " " Entire.                                                                                                  |
| Middleville, N. Y.             | As <i>Atrypa</i> . Somewhat exfoliated.                                                                      |
| Oxford, O.                     | Four individuals on the ventral and two on the dorsal valve of a specimen of <i>Strophomena planumbona</i> . |
| Ohio River, opp. Westport, Ky. | Twelve or more individuals on dorsal valve of <i>Platystrophia lynx</i> .                                    |
| Near Mineral Pt., Wis.         | Dorsal valve, imbedded.                                                                                      |
| Middleville, N. Y.             | " "                                                                                                          |
| .....                          | As <i>Atrypa</i> .                                                                                           |
| Adams, N. Y.                   | Entire.                                                                                                      |
| " "                            | Entire adult.                                                                                                |
| .....                          | As <i>Orthis</i> .                                                                                           |
| .....                          | " "                                                                                                          |
| Cincinnati, O.                 | Two dorsal valves, one used only for card. process and musc. impr.                                           |
| Fort Cassin, Vt.               | As <i>Orthis</i> . An imbedded dorsal valve.                                                                 |
| Beekmantown, N. Y.             | " " A dorsal ? and two ventral valves, imbedded.                                                             |
| .....                          | " "                                                                                                          |
| .....                          | " "                                                                                                          |
| .....                          | " "                                                                                                          |
| .....                          | " "                                                                                                          |
| Mineral Pt., Wis.              | An entire, perfect individual.                                                                               |
| .....                          | As <i>Orthis</i> .                                                                                           |
| Mineral Pt., Wis.              | Margin somewhat broken.                                                                                      |
| .....                          | As <i>Orthis subæquata</i> .                                                                                 |
| .....                          | " <i>Dalmanella subæquata</i> .                                                                              |
| Mineral Pt., Wis.              | " " " Detached ventral valve.                                                                                |
| .....                          | As <i>Orthis</i> .                                                                                           |
| .....                          | " "                                                                                                          |
| .....                          | " "                                                                                                          |
| .....                          | " "                                                                                                          |
| Mineral Pt., Wis.              | Entire, perfect, detached. See also <i>D. perveta</i> .                                                      |
| Middleville, N. Y.             | As <i>Orthis</i> . Detached individual.                                                                      |
| Cincinnati, O.                 | " " A dorsal valve and an individual of medium size.                                                         |
| Middleville, N. Y.             | " " Loc. incor. in expl. pl. Spec. evidently from Middleville.                                               |
| Pulaski, N. Y.                 | " " Imprints of two ventral and a dorsal valve.                                                              |
| .....                          | " " <i>testudinaria</i> , var.                                                                               |
| .....                          | Generic type.                                                                                                |
| Mineral Pt., Wis.              | " " Two entire individuals, a ventral and a dorsal valve.                                                    |
| .....                          | As <i>Orthis</i> .                                                                                           |
| Lowville, N. Y.                | Generic type. Two imbedded dorsal valves which were used.                                                    |
| .....                          | As <i>Orthis</i> . Enl. $\times 2$ and not nat. size, as stated in expl. of pl., vol. 8.                     |
| Middleville, N. Y.             | Generic type. Ventral valve, imbedded. Used for outline and hinge.                                           |
| .....                          | As <i>Orthis</i> .                                                                                           |
| Lowville, N. Y.                | Generic type. Ventral valve, imbedded. Used for muscular impr.                                               |
| .....                          | = <i>Spirifer</i> .                                                                                          |
| .....                          | See <i>Platystrophia lynx</i> .                                                                              |

## Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                                            | REFERENCE.   |          |      |      |                        |
|---------------|------------------|--------------------|---------------------------------------------------------------------------------------|--------------|----------|------|------|------------------------|
|               |                  |                    |                                                                                       | Work.        | Vol.     | P.   | Pl.  | Figs.                  |
| Tr.           | $\frac{679}{2}$  | Fig'd.             | <b>Dignomia</b> Hall.<br><i>quadrata</i> ( <i>Eichw.</i> ).. <i>Hall.</i>             | Pal. N. Y.   | I        | 96   | 30   | 4a, b                  |
|               |                  |                    | "    "    "    "                                                                      | Geol. Wis.   | I        | 46   | .... | I                      |
| "             | $\frac{692}{2}$  | "                  | <b>Dinorthis</b> Hall & Clarke.<br><i>pectinella</i> ( <i>Conrad</i> ).. <i>Hall.</i> | Pal. N. Y.   | I        | 123  | 32   | 10, <i>ext.d.v.</i>    |
| "             | "                | "                  | "    "    "    "                                                                      | "    "       | I        | 123  | 32   | 10a, b                 |
|               |                  |                    | "    "    "    "                                                                      | St. G. N. Y. | 2        | .... | 34   | 39, 40                 |
| "             | 692a             | Type.              | <i>H. &amp; C.</i><br>" var. <i>semiovalis</i> .. <i>H.</i>                           | Pal. N. Y.   | 8, pt. I | 195  | 5    | 27, 28                 |
|               |                  |                    | "    "    "    "                                                                      | "    "       | I        | 124  | 32   | 11, 11a, b             |
| "             | $\frac{909}{1}$  | "                  | <b>Hebertella</b> Hall & Clarke.<br><i>bellarugosa</i> ..... <i>Conrad.</i>           | P. A. N. S.  | I        | 333  | .... | ....                   |
|               |                  |                    | "    "    "    "                                                                      | Pal. N. Y.   | I        | 118  | 32   | 3a-e                   |
|               |                  |                    | "    "    "    "                                                                      | Geol. Wis.   | I        | 42   | ...  | 4-6                    |
| H. R.         | $\frac{912}{3}$  | "                  | <i>insculpta</i> ..... <i>Hall.</i>                                                   | Pal. N. Y.   | I        | 125  | 32   | 12a-d                  |
| "             | $\frac{1342}{1}$ | "                  | <i>occidentalis</i> ..... <i>Hall.</i>                                                | "    "       | I        | 127  | 32A  | 2a, c, e-g,<br>i, k, m |
| "             | "                | "                  | "    "    "    "                                                                      | "    "       | I        | 127  | 32B  | 1a, c, f, g            |
| "             | "                | Fig'd.             | "    "    "    "                                                                      | "    "       | I        | 129  | 32C  | 1a-n                   |
| "             | $\frac{1342}{5}$ | Type.              | "    "    "    "                                                                      | St. G. N. Y. | 2        | .... | 34   | 31, 32                 |
|               |                  |                    | "    "    "    "                                                                      | Pal. N. Y.   | 8, pt. I | 222  | 5A   | 11, 12                 |
| "             | $\frac{1342}{1}$ | "                  | "    "    "    "                                                                      | St. G. N. Y. | 2        | .... | 35   | 16-19                  |
| H. R.         | $\frac{1342}{1}$ | Type.              | <i>sinuata</i> ..... <i>Hall.</i>                                                     | Pal. N. Y.   | I        | 128  | 32B  | 2a, g-k                |
|               |                  |                    | "    "    "    "                                                                      | "    "       | I        | 128  | 32C  | 2n, o                  |
| "             | "                | "                  | "    "    "    "                                                                      | "    "       | I        | 128  | 32B  | 2e, f                  |
|               |                  |                    | "    "    "    "                                                                      | "    "       | I        | 128  | 32C  | 2m, p, s               |
| "             | "                | Fig'd.             | " ? ..... <i>H. &amp; C.</i>                                                          | St. G. N. Y. | 2        | ...  | 34   | 33, 34                 |
|               |                  |                    | "    "    "    "                                                                      | Pal. N. Y.   | 8, pt. I | .... | 5A   | 9, 10                  |
| "             | $\frac{1342}{2}$ | Gen. and Sp. Type. | "    "    "    "                                                                      | St. G. N. Y. | 2        | .... | 35   | 20, <i>int.d.v.</i>    |
|               |                  |                    | "    "    "    "                                                                      | "    "       | 11       | 266  | 10   | 3, "                   |
|               |                  |                    | "    "    "    "                                                                      | Pal. N. Y.   | 8, pt. I | 198  | 5A   | 3, "                   |
| "             | $\frac{1342}{1}$ | "                  | "    "    "    "                                                                      | St. G. N. Y. | 2        | .... | 35   | 21, <i>int.v.v.</i>    |
|               |                  |                    | "    "    "    "                                                                      | "    "       | 11       | 266  | 10   | 1, "                   |
|               |                  |                    | "    "    "    "                                                                      | Pal. N. Y.   | 8, pt. I | 198  | 5A   | 1, "                   |
|               |                  |                    | <b>Hemipronites</b> Pander.<br><i>apicalis</i> .....                                  |              |          |      |      |                        |
|               |                  |                    | <b>Leptæna</b> Dalman<br><i>alternata</i> .....                                       |              |          |      |      |                        |
|               |                  |                    | <i>alternistriata</i> .....                                                           |              |          |      |      |                        |
|               |                  |                    | <i>camerata</i> .....                                                                 |              |          |      |      |                        |
|               |                  |                    | <i>deflecta</i> .....                                                                 |              |          |      |      |                        |
|               |                  |                    | <i>deltoidea</i> .....                                                                |              |          |      |      |                        |
|               |                  |                    | <i>filitexta</i> .....                                                                |              |          |      |      |                        |
|               |                  |                    | <i>planoconvexa</i> .....                                                             |              |          |      |      |                        |
|               |                  |                    | <i>planumbona</i> .....                                                               |              |          |      |      |                        |
|               |                  |                    | <i>recta</i> .....                                                                    |              |          |      |      |                        |
|               |                  |                    | <i>sericea</i> .....                                                                  |              |          |      |      |                        |
|               |                  |                    | <i>subtenta</i> .....                                                                 |              |          |      |      |                        |
| H. R.         | $\frac{698}{6}$  | Fig'd.             | <i>tenuistriata</i> ( <i>Sow.</i> ).. <i>Hall.</i>                                    | Pal. N. Y.   | I        | 108  | 31A  | 4a, b, e-g             |
| Tr.           | $\frac{698}{3}$  | "                  | "    "    "    "                                                                      | "    "       | I        | 108  | 31A  | 4d, <i>ext.</i>        |
| H. R.         | $\frac{698}{8}$  | "                  | "    "    "    "                                                                      | St. G. N. Y. | 2        | ...  | 38   | 12, <i>int.</i>        |
|               |                  |                    | "    "    "    "                                                                      | Pal. N. Y.   | 8, pt. I | 276  | 8    | 12, "                  |
| "             | $\frac{698}{6}$  | "                  | "    "    "    "                                                                      | St. G. N. Y. | 2        | .... | 38   | 13-15                  |
|               |                  |                    | "    "    "    "                                                                      | "    "       | 11       | .... | 13   | 1, 2                   |
|               |                  |                    | "    "    "    "                                                                      | Pal. N. Y.   | 8, pt. I | 276  | 8    | 13-15                  |
| Ft. C.        | 443              | "                  | sp. ? ..... <i>Whitfield.</i>                                                         | A. M. N. H.  | I        | 302  | 24   | 6, <i>ext.</i>         |
|               |                  |                    | <b>Leptobolus</b> Hall.<br><i>insignis</i> ..... <i>Hall.</i>                         | N. Y. S. M.  | 24       | 227  | 7    | 17                     |
| U.            | $\frac{686}{3}$  | Type.              | "    "    "    "                                                                      | St. G. N. Y. | 11       | .... | 3    | 8                      |
|               |                  |                    | "    "    "    "                                                                      | Pal. N. Y.   | 8, pt. I | 73   | 3    | 3                      |



| LOCALITY.          | REMARKS.                                                                         |
|--------------------|----------------------------------------------------------------------------------|
| Lewis Co., N. Y.   | As <i>Lingula</i> .<br>" " Individual with broken cardinal area.                 |
| " "                | As <i>Orthis</i> . An entire individual from Dry Sugar River.                    |
| " "                | " "                                                                              |
| Lewis Co., N. Y.   | Gen. type. Entire indiv. from Dry Sugar Riv. Figs. are not enl.                  |
| Middleville, N. Y. | As <i>Orthis</i> . Imbedded ventral valve and detached individual.               |
| " "                | " "                                                                              |
| " "                | " "                                                                              |
| Mineral Pt., Wis.  | " " Detached, entire individual.                                                 |
| Cincinnati, O.     | " " Ventr. valve retaining ovarian markings. Beak imperf.                        |
| " "                | " " Four individ. One is very large, with margin broken.                         |
| " "                | " " Three individuals. Two are somewhat imperfect.                               |
| " "                | As types of <i>Orthis subjugata</i> . Five individuals.                          |
| " "                | As <i>Orthis</i> .                                                               |
| Savannah, Ill.     | Small, entire, probably young.                                                   |
| Cincinnati, O.     | As <i>Orthis</i> . Entire, perfect, adult. See also <i>Hebertella sinuata</i> .  |
| " "                | " "                                                                              |
| Cincinnati, O.     | " " Small, entire individ. and a large one, somewhat crushed.                    |
| " "                | " " Large, distorted individ. and two large opposite valves.                     |
| " "                | " " <i>occidentalis</i> ?                                                        |
| Cincinnati, O.     | An entire individual doubtfully referred to this species.                        |
| " "                | As <i>Orthis occidentalis</i> .                                                  |
| " "                | Made generic type.                                                               |
| Lebanon, O.        | A large dorsal valve.                                                            |
| " "                | As <i>Orthis occidentalis</i> .                                                  |
| " "                | Made generic type.                                                               |
| Cincinnati, O.     | A large ventral valve.                                                           |
| " "                | See <i>Polytæchia</i> .                                                          |
| " "                | See <i>Rafinesquina</i> .                                                        |
| " "                | " "                                                                              |
| " "                | " "                                                                              |
| " "                | " <i>Plæsiomys</i> .                                                             |
| " "                | " <i>Rafinesquina</i> .                                                          |
| " "                | " <i>Strophomena</i> .                                                           |
| " "                | " "                                                                              |
| " "                | " "                                                                              |
| " "                | " <i>Plæsiomys deflecta</i> .                                                    |
| " "                | " <i>Plectambonites</i> .                                                        |
| " "                | " <i>Strophomena</i> .                                                           |
| Cincinnati, O.     | A small ventral valve and an entire individual of medium size.                   |
| Carlisle, Pa.      | Ventral valve, imbedded.                                                         |
| " "                | As <i>Strophomena</i> .                                                          |
| Oxford, O.         | A small dorsal valve.                                                            |
| " "                | As <i>Strophomena</i> .                                                          |
| Lebanon, O.        | An entire adult. All the figures are from one individual.                        |
| Fort Cassin, Vt.   | Ventral valve, imbedded.                                                         |
| Utica, N. Y.       | Local. is incorrect in explanation of plates, and degree of enl. is $\times 6$ . |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.        | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.     | REFERENCE.   |          |      |       |                    |
|---------------|-----------------|--------------------|--------------------------------|--------------|----------|------|-------|--------------------|
|               |                 |                    |                                | Work.        | Vol.     | P.   | Pl.   | Figs.              |
| Tr.           | 674             | Type.              | <b>Lingula</b> Bruguière.      | Pal. N. Y.   | I        | 95   | 30    | 3a, b              |
| "             | 673             | Fig'd.             | æqualis.....Hall.              | " "          | I        | 94   | 30    | 1a, b              |
| U.            | $\frac{676}{2}$ | Type.              | attenuata (Sow.) ?..Hall.      | J. A. N. S.  | 8        | 266  | 15    | 12                 |
|               |                 |                    | curta .....Conrad.             | Pal. N. Y.   | I        | 97   | 30    | 6a                 |
| Tr.           | $\frac{676}{1}$ | Fig'd.             | " (Con.) .....Hall.            | " "          | I        | 97   | 30    | 6b                 |
| "             | 678             | Type.              | obtusa.....Hall.               | " "          | I        | 98   | 30    | 7a, b              |
|               |                 |                    | quadrata.....                  |              |          |      |       |                    |
| H. R.         | 1121            | Fig'd.             | rectilateralis (Con.) Hall.    | Pal. N. Y.   | I        | 285  | 79    | 1a, d. ? v.        |
| Tr.           | 680             | Type.              | riciniformis .....Hall.        | " "          | I        | 95   | 30    | 2a-c               |
|               |                 |                    | <b>Lingulops</b> Hall.         |              |          |      |       |                    |
| H. R.         | 1096            | Gen. and Sp. Type. | Whitfieldi.....Hall.           | N. Y. S. M.  | 23       | 245  | 13    | I, 2               |
|               |                 |                    | H. & C.                        | St. G. N. Y. | 11       | 234  | I     | 18, 19             |
|               |                 |                    | "                              | Pal. N. Y.   | 8, pt. I | 18   | 2     | 27-29              |
| H. R.         | 1096            | Gen. and Sp. Type  | " (Hall) H. & C.               | St. G. N. Y. | 11       | 234  | I     | 20                 |
|               |                 |                    | "                              | Pal. N. Y.   | 8, pt. I | 18   | 2     | 30                 |
|               |                 |                    | <b>Orbicula</b> Cuvier.        |              |          |      |       |                    |
|               |                 |                    | ? deformata. ....              |              |          |      |       |                    |
|               |                 |                    | ? filosa. ....                 |              |          |      |       |                    |
|               |                 |                    | lamellosa.....                 |              |          |      |       |                    |
|               |                 |                    | ? subtruncata.....             |              |          |      |       |                    |
|               |                 |                    | terminalis.....                |              |          |      |       |                    |
|               |                 |                    | <b>Orbiculoidea</b> d'Orbigny. |              |          |      |       |                    |
| Tr.           | 684             | Type.              | lamellosa.....Hall.            | Pal. N. Y.   | I        | 99   | 30    | 10a, b             |
|               |                 |                    | H. & C.                        | " "          | 8, pt. I | .... | 4E    | 12, ext. d. v. X 2 |
|               |                 |                    | <b>Orthis</b> Dalman.          |              |          |      |       |                    |
|               |                 |                    | bellarugosa.....               |              |          |      |       |                    |
| H. R.         | 1342            | Type.              | cincinnatensis S.A. Miller.    | Am. P. F.    | 2d ed.   | 296  |       |                    |
|               |                 |                    | Hall.                          | Am. J. Sci.  | 48       | 295  | ....  |                    |
| Ch.           | 528             | "                  | costalis .....Hall.            | Pal. N. Y.   | I        | 20   | 4 bis | 4a, b              |
|               |                 |                    | "                              | St. G. N. Y. | 2        | .... | 34    | 35-38              |
|               |                 |                    | H. & C.                        | Pal. N. Y.   | 8, pt. I | 221  | 5     | 15-17              |
|               |                 |                    | costata.....                   |              |          |      |       |                    |
|               |                 |                    | disparilis.....                |              |          |      |       |                    |
|               |                 |                    | ella.....                      |              |          |      |       |                    |
|               |                 |                    | emacerata.....                 |              |          |      |       |                    |
|               |                 |                    | erratica.....                  |              |          |      |       |                    |
|               |                 |                    | evadne.....                    |              |          |      |       |                    |
|               |                 |                    | fissicosta.....                |              |          |      |       |                    |
|               |                 |                    | insculpta.....                 |              |          |      |       |                    |
|               |                 |                    | Macleodi.....                  |              |          |      |       |                    |
|               |                 |                    | occidentalis.....              |              |          |      |       |                    |
|               |                 |                    | pectinella.....                |              |          |      |       |                    |
|               |                 |                    | " var. semiovalis.             |              |          |      |       |                    |
|               |                 |                    | perveta.....                   |              |          |      |       |                    |
|               |                 |                    | plicatella.....                |              |          |      |       |                    |
|               |                 |                    | sinuata.....                   |              |          |      |       |                    |
|               |                 |                    | subæquata.....                 |              |          |      |       |                    |
|               |                 |                    | subjugata.....                 |              |          |      |       |                    |
|               |                 |                    | subquadrata.....               |              |          |      |       |                    |
|               |                 |                    | testudinaria.....              |              |          |      |       |                    |
| Tr.           | 911             | Fig'd.             | tricenaria.....Conrad.         | P. A. N. S.  | I        | 333  | ...   |                    |
|               |                 |                    | Hall.                          | Pal. N. Y.   | I        | 119  | 32    | 4a-d               |
| "             | $\frac{691}{1}$ | "                  | " (Con.).....Hall.             | " "          | I        | 121  | 32    | 8a, c              |
|               |                 |                    | "                              | Geol. Wis.   | I        | 42   | ...   | 8, 9               |
| "             | $\frac{691}{2}$ | "                  | " "....."                      | St. G. N. Y. | 2        | .... | 35    | 1-5                |
|               |                 |                    | H. & C.                        | " "          | 11       | .... | 9     | 4, 5, 7            |
|               |                 |                    | "                              | Pal. N. Y.   | 8, pt. I | 193  | 5     | 9-12, 14           |



| LOCALITY.            | REMARKS.                                                               |
|----------------------|------------------------------------------------------------------------|
| Middleville, N. Y.   | A dorsal and a ventral valve, imbedded.                                |
| “ “                  | First figure combined from two indiv. Second a large vent. valve.      |
| Carlisle, Penn.      | Imbedded valve.                                                        |
| Middleville, N. Y.   | “ “                                                                    |
| “ “                  | Two dorsal valves, imbedded. Two unfig'd spec. are in type series.     |
| .....                | See <i>L. rectilateralis</i> and <i>Dignomia quadrata</i> .            |
| Lorraine, N. Y.      | As <i>L. quadrata</i> , Eichw. Exfol. dorsal ? valve, imbedded.        |
| Middleville, N. Y.   | Three ventral valves, imbedded.                                        |
| .....                |                                                                        |
| Maquoketa Creek, Ia. | A ventral valve and imprint of two other ventral valves in same block. |
| .....                | Locality is 12 miles N. W. of Dubuque.                                 |
| Maquoketa Creek, Ia. | Figure <i>may</i> have been made from an impression of this specimen,  |
| .....                | which is an internal cast of dorsal valve.                             |
| .....                |                                                                        |
| .....                | See <i>Stenotheca dubia</i> .                                          |
| .....                | “ <i>Schizocrania</i> .                                                |
| .....                | “ <i>Orbiculoidea</i> .                                                |
| .....                | “ <i>Pholidops</i> .                                                   |
| .....                | “ <i>Trematis</i> .                                                    |
| .....                |                                                                        |
| .....                | As <i>Orbicula</i> .                                                   |
| Middleville, N. Y.   | Dorsal valve, imbedded, somewhat crushed.                              |
| .....                |                                                                        |
| .....                | See <i>Hebertella</i> .                                                |
| .....                |                                                                        |
| Cincinnati, O.       | As type of <i>O. costata</i> , preoccupied. Entire.                    |
| .....                |                                                                        |
| Chazy, N. Y.         | Imprints of 4 valves, 2 dorsal and 2 ventral. Two retain some shell.   |
| .....                | See <i>O. cincinnatensis</i> .                                         |
| .....                | “ “ <i>tricenaria</i> .                                                |
| .....                | “ <i>Plectorthis sordida</i> .                                         |
| .....                | “ <i>Dalmanella</i> .                                                  |
| .....                | “ <i>Zygospira</i> .                                                   |
| .....                | “ <i>Dalmanella</i> .                                                  |
| .....                | “ <i>Plectorthis</i> .                                                 |
| .....                | “ <i>Hebertella</i> .                                                  |
| .....                | “ <i>Dalmanella</i> .                                                  |
| .....                | “ <i>Hebertella</i> .                                                  |
| .....                | “ <i>Dinorthis</i> .                                                   |
| .....                | “ “                                                                    |
| .....                | “ <i>Dalmanella</i> .                                                  |
| .....                | “ <i>Plectorthis</i> .                                                 |
| .....                | “ <i>Hebertella</i> .                                                  |
| .....                | “ <i>Dalmanella</i> .                                                  |
| .....                | “ <i>Hebertella</i> .                                                  |
| .....                | “ <i>Plæsiomys</i> .                                                   |
| .....                | “ <i>Dalmanella</i> .                                                  |
| .....                | As type of <i>O. disparilis</i> .                                      |
| Mineral Pt., Wis.    | “ <i>O. disparilis</i> , Con., but is young of <i>O. tricenaria</i> .  |
| .....                |                                                                        |
| Middleville, N. Y.   | An entire individual and an imbedded ventral valve.                    |
| .....                |                                                                        |
| Mineral Pt., Wis.    | An entire individual, a dorsal and two ventral valves.                 |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                               | REFERENCE.   |          |      |        |                        |
|---------------|------------------|--------------------|--------------------------------------------------------------------------|--------------|----------|------|--------|------------------------|
|               |                  |                    |                                                                          | Work.        | Vol.     | P.   | Pl.    | Figs.                  |
| Tr.           | $\frac{710}{1}$  | Type.              | <b>Parastrophia</b> H. & C.<br>hemiplicata . . . . . Hall.               | Pal. N. Y.   | I        | 144  | 33     | 10a-f                  |
| H. R.         | $\frac{1120}{1}$ | "                  | <b>Pholidops</b> Hall.<br>subtruncata . . . . . Hall.                    | " "          | I        | 290  | 79     | 7a, b                  |
|               |                  |                    | " " " "                                                                  | N. Y. S. M.  | 24       | 221  | 7      | 9, <i>enl.</i> x 4     |
| Tr.           | $\frac{689}{1}$  | "                  | H. & C.<br>trentonensis . . . . . Hall.                                  | Pal. N. Y.   | 8, pt. I | .... | 4 I    | 19, <i>enl.</i> x 4    |
|               |                  |                    | H. & C.<br>" " " "                                                       | N. Y. S. M.  | 24       | 221  | 7      | 8, <i>d.v.</i> x 4     |
|               |                  |                    | " " " "                                                                  | Pal. N. Y.   | 8, pt. I | 157  | 4 I    | 17, "                  |
| "             | $\frac{921}{1}$  | Type.              | <b>Plæsiomys</b> H. & C.<br>deflectus ( <i>Con.</i> ) . . . . Hall.      | Pal. N. Y.   | I        | 113  | 31B    | 5a-c, & one not numb'd |
| "             | 920              | Fig'd.             | " " " " " " " "                                                          | P. A. N. S.  | I        | 332  | ....   | ....                   |
|               |                  |                    | Hall.<br>" " " " " " " "                                                 | Pal. N. Y.   | I        | 113  | 31B    | 6a, b                  |
| H. R.         | $\frac{913}{6}$  | Gen. and Sp. Type. | subquadratus . . . . . Hall.                                             | " "          | I        | 126  | 32A    | 1a-n                   |
|               |                  |                    | " " " " " " " "                                                          | Geol. Wis.   | I        | 54   | ct. 10 | 1, 2                   |
|               |                  |                    | H. & C.<br>" " " " " " " "                                               | Pal. N. Y.   | 8, pt. I | 196  | ....   | ....                   |
| "             | $\frac{693}{1}$  | Fig'd.             | <b>Platystrophia</b> King.<br>biforata <i>Schlotheim</i> ,               |              |          |      |        |                        |
| "             | $\frac{693}{11}$ | "                  | var. lynx ( <i>Eichw.</i> ) H.                                           | Pal. N. Y.   | I        | 133  | 32 D   | 1a-g                   |
|               |                  |                    | " " " " " " " "                                                          | " "          | I        | 133  | 32 D   | 1k-1U                  |
| Tr.           | $\frac{704}{1}$  | Fig'd.             | <b>Plectambonites</b> Pander.<br>sericea ( <i>Sow.</i> ) . . . . . Hall. | " "          | I        | 110  | 31B    | 2a-f                   |
|               |                  |                    | " " " " " " " "                                                          | Geol. Wis.   | I        | 42   | ...    | 17 <i>d. v.</i>        |
| H. R.         | $\frac{704}{11}$ | "                  | " " " " " " " "                                                          | Pal. N. Y.   | I        | 287  | 79     | 3a-b                   |
| Tr.           | $\frac{704}{4}$  | "                  | " " " " " " " "                                                          | St. G. N. Y. | 2        | .... | 46     | 25-29                  |
|               |                  |                    | H. & C.<br>" " " " " " " "                                               | " "          | 11       | .... | 19     | 4-7                    |
|               |                  |                    | " " " " " " " "                                                          | Pal. N. Y.   | 8, pt. I | .... | 15     | 25-29                  |
| H. R.         | 4490             | Type.              | <b>Plectorthis</b> H. & C.<br>fissicosta . . . . . Hall.                 | " "          | I        | 121  | 32     | 7a, b                  |
| "             | $\frac{695}{2}$  | Gen. and Sp. Type. | plicatella . . . . . Hall.                                               | " "          | I        | 122  | 32     | 9a-g                   |
| "             | 1354             | Type.              | ? sordida . . . . . Hall.                                                | " "          | I        | 148  | 33     | 16, <i>d. ? v.</i>     |
| "             | $\frac{1056}{3}$ | Fig'd.             | " " " " " " " "                                                          | N. Y. S. M.  | 13       | 121  | ....   | ....                   |
|               |                  |                    | " " " " " " " "                                                          | " "          | 15       | 158  | 2      | 6-8                    |
| Ft. C.        | 444              | Gen. and Sp. Type. | <b>Polytoechia</b> H. & C.<br>apicalis . . . . . Whitfield.              | A. M. N. H.  | I        | 300  | 24     | 1-5                    |
|               |                  |                    | Hall.<br>" " " " " " " "                                                 | St. G. N. Y. | 8        | 44   | ....   | ....                   |
|               |                  |                    | H. & C.<br>" " " " " " " "                                               | " "          | 11       | 275  | 8      | 16-18                  |
|               |                  |                    | " " " " " " " "                                                          | Pal. N. Y.   | 8, pt. I | 239  | 7A     | 28-30                  |
| "             | 505              | Type.              | <b>Protorthis</b> H. & C.<br>cassinensis . . . . . Whitfield.            | A. M. N. H.  | 9        | 178  | 4      | 1, 2                   |
| "             | 506              | "                  | minima . . . . . Whitfield.                                              | " "          | 9        | 178  | 4      | 3, 4                   |
| Tr.           | 714              | Type.              | <b>Protozyga</b> H. & C.<br>exigua . . . . . Hall.                       | Pal. N. Y.   | I        | 141  | 33     | 6a-d                   |
| "             | "                | "                  | " " " " " " " "                                                          | St. G. N. Y. | 13       | 810  | 40     | 4, 5                   |
|               |                  |                    | " " " " " " " "                                                          | Pal. N. Y.   | 8, pt. 2 | 149  | 54     | 47, 48                 |
| "             | $\frac{697}{2}$  | Fig'd.             | <b>Rafinesquina</b> H. & C.<br>alternata ( <i>Con.</i> ) . . . . Hall.   | Pal. N. Y.   | I        | 102  | 31     | 1a, e                  |
| "             | $\frac{697}{1}$  | "                  | " " " " " " " "                                                          | " "          | I        | 102  | 31     | 1c-d, h                |
| H. R.         | $\frac{697}{18}$ | "                  | " " " " " " " "                                                          | " "          | I        | 102  | 31     | 1g, <i>ext. v. v.</i>  |
|               |                  |                    | " " " " " " " "                                                          | Geol. Wis.   | I        | 54   | ct. 10 | 6, "                   |
| "             | "                | "                  | " " " " " " " "                                                          | Pal. N. Y.   | I        | 102  | 31     | 1i-m*                  |
| "             | "                | "                  | " " " " " " " "                                                          | " "          | I        | 102  | 31A    | 1a-c                   |
| Tr.           | $\frac{697}{2}$  | "                  | " " " " " " " "                                                          | " "          | I        | 102  | 31A    | 1d, <i>ext. d. v.</i>  |
| "             | $\frac{697}{1}$  | "                  | " " " " " " " "                                                          | " "          | I        | 102  | 31A    | 1e-g                   |
| H. R.         | $\frac{697}{17}$ | "                  | " " " " " " " "                                                          | " "          | I        | 286  | 79     | 2a, c, f*              |
| "             | "                | "                  | " " " " " " " "                                                          | " "          | I        | 286  | 79     | 2g-i                   |



| LOCALITY.            | REMARKS.                                                                                       |
|----------------------|------------------------------------------------------------------------------------------------|
| Middleville, N. Y.   | As <i>Atrypa</i> . Three entire individuals.                                                   |
| .....                | As <i>Orbicula</i> ?                                                                           |
| Lorraine, N. Y.      | A group of individuals, imbedded. Probably not a true <i>Pholidops</i> .                       |
| Middleville, N. Y.   | Dorsal valve, imbedded.                                                                        |
| Mineral Pt., Wis.    | As <i>Leptæna</i> . Probably Conrad's type specimen with figs. enlarged.                       |
| .....                | As type of <i>Strophomena recta</i> .                                                          |
| Mineral Pt., Wis.    | As <i>Leptæna recta</i> Con., but really is a young <i>P. deflectus</i> . Entire.              |
| .....                | As <i>Orthis</i> .                                                                             |
| .....                | " "                                                                                            |
| Cincinnati, O.       | Generic name proposed. Four individuals and a large ventral valve.                             |
| Middleville, N. Y.   | As <i>Delthyris</i> . Four small, entire individuals.                                          |
| Cincinnati, O.       | " " Fourteen small to very large individuals.                                                  |
| .....                | As <i>Leptæna</i> .                                                                            |
| Middleville, N. Y.   | " " Two individuals and two dorsal valves.                                                     |
| Near W. Turin, N. Y. | " " Two interior imprints dorsal valves.                                                       |
| .....                | " "                                                                                            |
| Mineral Pt., Wis.    | An entire individual and two opposite detached valves.                                         |
| Cincinnati, O.       | As <i>Orthis</i> . Entire, somewhat crushed.                                                   |
| " "                  | " " Four individuals ranging from very small to large.                                         |
| " "                  | " <i>Atrypa</i> . Entire, small.                                                               |
| .....                | " type of <i>Orthis ella</i> .                                                                 |
| Cincinnati, O.       | " " " ? " Two entire individuals.                                                              |
| .....                | As <i>Hemipronites</i> .                                                                       |
| .....                | Made type of genus <i>Waagenia</i> , but name was preoccupied.                                 |
| .....                | " " " <i>Polytaechia</i> .                                                                     |
| Fort Cassin, Vt.     | Two ventral valves imbedded separately.                                                        |
| " "                  | Two individuals ? imbedded.                                                                    |
| " "                  | " " " "                                                                                        |
| Lewis Co., N. Y.     | As <i>Atrypa</i> . Three entire individuals.                                                   |
| Watertown, N. Y.     | A large entire individual.                                                                     |
| " "                  | As <i>Leptæna</i> . Two ventral valves imbedded.                                               |
| Middleville, N. Y.   | " " A dorsal and two ventral valves, imbedded.                                                 |
| .....                | " "                                                                                            |
| Cincinnati, O.       | " <i>Strophomena</i> . Very large individual, imbedded.                                        |
| " "                  | " <i>Leptæna</i> . Two imperfect individuals and a large ventral valve.                        |
| " "                  | " " Two entire individuals of medium size.                                                     |
| Watertown, N. Y.     | " " Dorsal valve, imbedded.                                                                    |
| Middleville, N. Y.   | " " Three ventral valves, imbedded.                                                            |
| Near Pulaski, N. Y.  | " " Three interior casts of ventral valves, one imbedded.                                      |
| " "                  | " " An imperfect imbedded valve and two internal casts of ventral valves retaining some shell. |

## Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                                                                                                                                                     | REFERENCE.                                                 |                                                 |                                           |                                           |                                                         |
|---------------|------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------|-------------------------------------------|-------------------------------------------|---------------------------------------------------------|
|               |                  |                    |                                                                                                                                                                                                | Work.                                                      | Vol.                                            | P.                                        | Pl.                                       | Figs.                                                   |
| H. R.         | $\frac{697}{18}$ | Fig'd Sp and G. T. | <b>Rafinesquina</b> H. & C.— <i>Cont.</i><br><i>alternata</i> ( <i>Con.</i> ).... <i>Hall.</i><br><i>H. &amp; C.</i>                                                                           | St. G. N. Y.<br>St. G. N. Y.<br>Pal. N. Y.                 | 2<br>11<br>8, pt. I                             | ....<br>279<br>282                        | 38<br>13<br>8                             | 6-II<br>5, 13, 14, 17<br>6-II                           |
| "             | 1350             | Type.              | <i>alternistriata</i> ..... <i>Hall.</i>                                                                                                                                                       | " "                                                        | 1                                               | 109                                       | 31B                                       | 1a-c                                                    |
| Tr.           | $\frac{699}{2}$  | Fig'd.             | <i>camerata</i> ( <i>Con.</i> ).... <i>Hall.</i>                                                                                                                                               | " "                                                        | 1                                               | 106                                       | 31A                                       | 2a, b                                                   |
| "             | $\frac{701}{1}$  | Type.              | <i>deltoidea</i> ..... <i>Conrad.</i><br>"<br><i>Emmons.</i><br><i>Vanuxem.</i><br><i>Hall.</i><br><i>H. &amp; C.</i>                                                                          | Geol. N. Y.<br>"<br>"<br>"<br>Pal. N. Y.<br>"              | 1838<br>1839<br>2d D.<br>3d D.<br>1<br>8, pt. I | 115<br>64<br>389<br>46<br>106<br>283      | ....<br>....<br>....<br>....<br>31A<br>9A | ....<br>....<br>2, <i>ext.</i><br>2, "<br>3f, "<br>4, " |
| "             | $\frac{699}{2}$  | Fig'd.             | " ( <i>Con.</i> ) .. <i>Hall.</i>                                                                                                                                                              | " "                                                        | 1                                               | 106                                       | 31A                                       | 3a, <i>prof.</i>                                        |
| "             | $\frac{700}{2}$  | "                  | " " " " " "                                                                                                                                                                                    | " "                                                        | 1                                               | 106                                       | 31A                                       | 3b, c                                                   |
| "             | $\frac{701}{1}$  | "                  | " " " " " "                                                                                                                                                                                    | " "                                                        | 1                                               | 106                                       | 31A                                       | 3d, <i>ext.</i>                                         |
| "             | $\frac{700}{4}$  | "                  | <i>incrassata</i> ( <i>Safford</i> ) <i>Hall.</i>                                                                                                                                              | Geol. Wis.                                                 | 1                                               | 42                                        | ....                                      | 16, <i>d. v.</i>                                        |
| "             | $\frac{697}{7}$  | "                  | " " " " " "                                                                                                                                                                                    | St. G. N. Y.                                               | 2                                               | ....                                      | 38                                        | 1, "                                                    |
| "             |                  |                    | <i>H. &amp; C.</i>                                                                                                                                                                             | Pal. N. Y.                                                 | 8, pt. I                                        | 283                                       | 8                                         | 1, "                                                    |
| "             | $\frac{700}{4}$  | "                  | " ( <i>Safford</i> ) <i>Hall.</i>                                                                                                                                                              | St. G. N. Y.                                               | 2                                               | ....                                      | 38                                        | 2, <i>int.</i>                                          |
| "             |                  |                    | <i>H. &amp; C.</i>                                                                                                                                                                             | Pal. N. Y.                                                 | 8, pt. I                                        | 283                                       | 8                                         | 2, "                                                    |
| "             | $\frac{700}{13}$ | "                  | " ( <i>Safford</i> ) <i>Hall.</i>                                                                                                                                                              | St. G. N. Y.                                               | 2                                               | ....                                      | 38                                        | 3                                                       |
| "             |                  |                    | <i>H. &amp; C.</i>                                                                                                                                                                             | Pal. N. Y.                                                 | 8, pt. I                                        | 283                                       | 8                                         | 3                                                       |
| "             | "                | "                  | " ( <i>Safford</i> ) <i>Hall.</i>                                                                                                                                                              | St. G. N. Y.                                               | 2                                               | ...                                       | 38                                        | 4                                                       |
| "             |                  |                    | <i>H. &amp; C.</i>                                                                                                                                                                             | Pal. N. Y.                                                 | 8, pt. I                                        | 283                                       | 8                                         | 4                                                       |
| "             | $\frac{700}{6}$  | "                  | " ( <i>Safford</i> ) <i>Hall.</i>                                                                                                                                                              | St. G. N. Y.                                               | 2                                               | ....                                      | 38                                        | 5                                                       |
| "             |                  |                    | <i>H. &amp; C.</i>                                                                                                                                                                             | Pal. N. Y.                                                 | 8, pt. I                                        | 283                                       | 8                                         | 5                                                       |
|               |                  |                    | <b>Rhynchotrema</b> Hall.                                                                                                                                                                      |                                                            |                                                 |                                           |                                           |                                                         |
| H. R.         | $\frac{709}{5}$  | Fig'd.             | <i>capax</i> ( <i>Conrad</i> ).... <i>Hall.</i>                                                                                                                                                | Pal. N. Y.                                                 | 1                                               | 146                                       | 33                                        | 13k-o, t-y                                              |
| "             | $\frac{709}{7}$  | "                  | " " " " " "                                                                                                                                                                                    | N. Y. S. M.                                                | 13                                              | 67, 68                                    | ....                                      | 9-II, 14                                                |
| "             |                  |                    | "                                                                                                                                                                                              | Geol. Wis.                                                 | 1                                               | 55                                        | ct. 12                                    | 5-7                                                     |
| "             | $\frac{1358}{1}$ | Type.              | <i>dentata</i> ..... <i>Hall.</i>                                                                                                                                                              | Pal. N. Y.                                                 | 1                                               | 148                                       | 33                                        | 14a-c                                                   |
| Tr.           | $\frac{707}{1}$  | "                  | <i>increbescens</i> ..... <i>Hall.</i><br>"                                                                                                                                                    | " "<br>Geol. Wis.                                          | 1<br>1                                          | 146<br>55                                 | 33<br>ct 12                               | 13a-i<br>I-4                                            |
|               |                  |                    | <b>Schizocrania</b> H. & W.                                                                                                                                                                    |                                                            |                                                 |                                           |                                           |                                                         |
| "             | $\frac{688}{1}$  | "                  | <i>filosa</i> ..... <i>Hall.</i>                                                                                                                                                               | Pal. N. Y.                                                 | 1                                               | 99                                        | 30                                        | 9a-d                                                    |
| H. R.         | $\frac{688}{4}$  | Gen. and Sp. Type. | " ( <i>Hall</i> ) .. <i>H. &amp; W.</i>                                                                                                                                                        | Pal. Ohio.                                                 | 2                                               | 73                                        | I                                         | 14, <i>int. d. v.</i> X 2                               |
| Tr.           | 1333             | Type.              | ? <i>rudis</i> .... <i>H. &amp; W.</i><br><i>H. &amp; C.</i>                                                                                                                                   | N. Y. S. M.<br>Pal. N. Y.                                  | 23<br>8, pt. I                                  | 243<br>142                                | 13<br>4G                                  | 19, <i>d. v.</i> X 2<br>21, "                           |
|               |                  |                    | <b>Streptorhynchus</b><br>( <b>Strophonella</b> ).<br><i>deltoideum</i> .....<br><i>filitextum</i> .....<br><i>planoconvexum</i> .....<br><i>planumbonum</i> .....<br><i>primordiale</i> ..... | .....<br>.....<br>.....<br>.....<br>.....                  | .....<br>.....<br>.....<br>.....<br>.....       | .....<br>.....<br>.....<br>.....<br>..... | .....<br>.....<br>.....<br>.....<br>..... | .....<br>.....<br>.....<br>.....<br>.....               |
|               |                  |                    | <b>Strophomena</b> Raf. ( <i>Blainv.</i> ).<br><i>alternata</i> .....<br><i>deltoidea</i> .....<br><i>filitexta</i> ..... <i>Hall.</i><br>"<br><i>H. &amp; C.</i>                              | .....<br>.....<br>Pal. N. Y.<br>St. G. N. Y.<br>Pal. N. Y. | .....<br>.....<br>1<br>2<br>8, pt. I            | .....<br>.....<br>111<br>....<br>251      | 31B<br>39<br>9<br>9A                      | 3a, b<br>1, 6<br>1, 6<br>14                             |
| "             | "                | "                  | " ..... <i>Hall.</i><br>"                                                                                                                                                                      | " "<br>Geol. Wis.                                          | 1<br>1                                          | 111<br>42                                 | 31B<br>....                               | 3c, <i>int.</i><br>14, "                                |
| "             | $\frac{702}{2}$  | "                  | " " " " " "                                                                                                                                                                                    | St. G. N. Y.                                               | 2                                               | ....                                      | 39                                        | 2, 4, 5                                                 |
| "             |                  |                    | <i>H. &amp; C.</i>                                                                                                                                                                             | Pal. N. Y.                                                 | 8, pt. I                                        | 251                                       | 9                                         | 2, 4, 5                                                 |



| LOCALITY.             | REMARKS.                                                                                      |
|-----------------------|-----------------------------------------------------------------------------------------------|
| .....                 | As <i>Strophomena</i> .                                                                       |
| .....                 | Made generic type of <i>Rafinesquina</i> . A large individual and two large opposite valves.  |
| Cincinnati, O.        | As <i>Leptaena</i> . Imbedded ventral valve and two large free individuals.                   |
| " "                   | Figs. 1a and 1b were not made from the same specimen.                                         |
| Trenton Falls, N. Y.  | As <i>Leptaena</i> . Ventral valve, imbedded. See also <i>R. deltoidea</i> .                  |
| .....                 | " " Catalogue name.                                                                           |
| .....                 | " <i>Strophomena</i> .                                                                        |
| .....                 | " "                                                                                           |
| .....                 | " "                                                                                           |
| .....                 | " <i>Leptaena</i> .                                                                           |
| Middleville, N. Y.    | Exterior imprint ventral valve on slab with fig. 3d, pl. 31A.                                 |
| Trenton Falls, N. Y.  | As <i>Leptaena</i> . Prob. is <i>R. camerata</i> , but d.v. and card. area do not show.       |
| Watertown, N. Y.      | " " " " <i>incrassata</i> Safford.                                                            |
| Middleville, N. Y.    | " " Ventral valve on slab with fig. 4, pl. 9A.                                                |
| Mineral Pt., Wis.     | " <i>Strophomena</i> . Entire, margin broken since figure was made.                           |
| .....                 | " "                                                                                           |
| Platteville, Wis.     | Entire individual.                                                                            |
| .....                 | As <i>Strophomena</i> .                                                                       |
| Mineral Pt., Wis.     | Dorsal valve, imbedded.                                                                       |
| .....                 | As <i>Strophomena</i> .                                                                       |
| Near Nashville, Tenn. | A dorsal valve. The figure is of cardinal process $\times 3$ .                                |
| .....                 | As <i>Strophomena</i> .                                                                       |
| Near Nashville, Tenn. | An entire individual. Figure shows cardinal area $\times 3$ .                                 |
| .....                 | As <i>Strophomena</i> .                                                                       |
| Dodgeville, Wis.      | Internal cast of ventral valve.                                                               |
| .....                 |                                                                                               |
| Oxford, O.            | As type of <i>Atrypa increbescens</i> . Five entire individuals.                              |
| .....                 | " <i>Atrypa increbescens</i> . A very gibbous individual and a ventral valve of medium size.  |
| Iron Ridge, Wis.      | As <i>Atrypa</i> . Entire, rather small.                                                      |
| Cincinnati, O.        | " "                                                                                           |
| .....                 | " " Four entire individuals.                                                                  |
| Middleville, N. Y.    |                                                                                               |
| " "                   | As <i>Orbicula</i> ? Two imbedded dorsal valves and two imbedded individuals retaining shell. |
| Cincinnati, O.        | Internal cast dorsal valve on a <i>Rafinesquina alternata</i> .                               |
| .....                 | As <i>Trematis</i> .                                                                          |
| Clifton, Tenn.        | Internal cast retaining some shell. From the hydraulic beds.                                  |
| .....                 |                                                                                               |
| .....                 | See <i>Strophomena nutans</i> and <i>S. Winchelli</i> .                                       |
| .....                 | " "                                                                                           |
| .....                 | " "                                                                                           |
| .....                 | " "                                                                                           |
| .....                 | " <i>Billingsella</i> .                                                                       |
| .....                 |                                                                                               |
| .....                 | " <i>Rafinesquina</i> .                                                                       |
| .....                 | " "                                                                                           |
| .....                 | As <i>Leptaena</i> .                                                                          |
| .....                 | " <i>Streptorhynchus</i> .                                                                    |
| .....                 |                                                                                               |
| Middleville, N. Y.    | Two entire individuals, one used for the enlargement only.                                    |
| .....                 | As <i>Leptaena</i> .                                                                          |
| Middleville, N. Y.    | Ventral valve, imbedded.                                                                      |
| .....                 | As <i>Streptorhynchus</i> .                                                                   |
| Mineral Pt., Wis.     | Two ventral valves, one imbedded.                                                             |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                               | REFERENCE.   |          |     |       |                       |
|---------------|------------------|-------------------|----------------------------------------------------------|--------------|----------|-----|-------|-----------------------|
|               |                  |                   |                                                          | Work.        | Vol.     | P.  | Pl.   | Figs.                 |
| Tr.           | $\frac{702}{4}$  | Type.             | <b>Strophomena</b> Raf.(Bl.)—Cont.<br>flitexta.....Hall. | St. G. N. Y. | 2        | ... | 39.   | 3, <i>int.</i>        |
| H. R.         | $\frac{702}{12}$ | "                 | ".....Hall.                                              | Pal. N. Y.   | 8, pt. I | 25I | 9     | 3, "                  |
|               |                  |                   | ".....Hall.                                              | St. G. N. Y. | 2        | ... | 42    | 12, 13                |
| "             | $\frac{4492}{3}$ | Fig'd.            | nutans (James)....Hall.                                  | Pal. N. Y.   | 8, pt. I | 25I | 9A    | 12, 13                |
|               |                  |                   | ".....Hall.                                              | St. G. N. Y. | 2        | ... | 39    | 11, <i>card.</i>      |
| "             | "                | "                 | " (James)....Hall.                                       | Pal. N. Y.   | 8, pt. I | 25I | 9     | 11, "                 |
|               |                  |                   | ".....Hall.                                              | St. G. N. Y. | 2        | ... | 42    | 5, <i>d. v.</i>       |
| "             | $\frac{4492}{2}$ | "                 | " (James) ....Hall.                                      | Pal. N. Y.   | 8, pt. I | 25I | 9A    | 5, "                  |
|               |                  |                   | ".....Hall.                                              | St. G. N. Y. | 2        | ... | 42    | 6, <i>int.</i>        |
| "             | $\frac{919}{2}$  | Type.             | planoconvexa.....Hall.                                   | Pal. N. Y.   | 8, pt. I | 25I | 9A    | 6, "                  |
|               |                  |                   | ".....Hall.                                              | " "          | I        | 114 | 31B   | 7a, c, d              |
| "             | $\frac{918}{3}$  | "                 | ".....Hall.                                              | St. G. N. Y. | 2        | ... | 39    | 19, 20                |
|               |                  |                   | ".....Hall.                                              | Pal. N. Y.   | 8, pt. I | 25I | 9     | 19, 20                |
| "             | $\frac{918}{4}$  | "                 | planumbona .....Hall.                                    | " "          | I        | 112 | 31B   | 4a-c, e               |
|               |                  |                   | ".....Hall.                                              | " "          | I        | 112 | 31B   | 4d, <i>int.</i>       |
| "             | $\frac{918}{4}$  | "                 | ".....Hall.                                              | Geol. Wis.   | I        | 54  | ct.10 | 7, "                  |
|               |                  |                   | ".....Hall.                                              | St. G. N. Y. | 2        | ... | 42    | 8                     |
| "             | "                | "                 | ".....Hall.                                              | " "          | II       | ... | 16    | 4                     |
|               |                  |                   | ".....Hall.                                              | Pal. N. Y.   | 8, pt. I | 25I | 9A    | 8                     |
| "             | $\frac{922}{2}$  | Fig'd.            | subtenta (Conrad)..Hall.                                 | St. G. N. Y. | 2        | ... | 39    | 16, 17                |
|               |                  |                   | tenuistriata.....Hall.                                   | " "          | II       | ... | 16    | 2, 3                  |
| Tr.           | $\frac{701a}{1}$ | Type.             | Winchelli.....H. & C.                                    | Pal. N. Y.   | 8, pt. I | 344 | 9     | 16, 17                |
|               |                  |                   | ".....Hall.                                              | St. G. N. Y. | 2        | ... | 39    | 10, 14                |
| "             | $\frac{701a}{2}$ | "                 | " (H. & C.) Hall.                                        | St. G. N. Y. | 2        | ... | 39    | 10, 14                |
|               |                  |                   | ".....Hall.                                              | St. G. N. Y. | 2        | ... | 39    | 12, <i>int.</i>       |
| "             | $\frac{701a}{3}$ | "                 | " (H. & C.) Hall.                                        | Pal. N. Y.   | 8, pt. I | 344 | 9     | 12, "                 |
|               |                  |                   | ".....Hall.                                              | Pal. N. Y.   | 8, pt. I | 344 | 20    | 26                    |
| Ft. C.        | 442              | Gen. and Sp.Type. | Syntrophia Hall.<br>lateralis.....Whitfield.             | St. G. N. Y. | 2        | ... | 39    | 13, <i>int.</i>       |
|               |                  |                   | ".....H. & C.                                            | Pal. N. Y.   | 8, pt. I | 344 | 9     | 13, "                 |
| H. R.         | $\frac{1336}{2}$ | Type.             | Trematis Sharpe.<br>millepunctata.....Hall.              | A. M. N. H.  | I        | 303 | 24    | 9-11                  |
|               |                  |                   | ".....H. & C.                                            | St. G. N. Y. | 13       | 836 | 45    | 7-9                   |
| "             | "                | "                 | ".....Hall.                                              | Pal. N. Y.   | 8, pt. 2 | 216 | 62    | 1, 2, 6               |
|               |                  |                   | ".....Hall.                                              | N. Y. S. M.  | 24       | 221 | 7     | 22-24                 |
| "             | "                | "                 | ".....Hall.                                              | St. G. N. Y. | II       | ... | 6     | 2-4                   |
|               |                  |                   | ".....Hall.                                              | Pal. N. Y.   | 8, pt. I | 142 | 4G    | 6-8                   |
| "             | "                | "                 | ".....Hall.                                              | " "          | 8, pt. I | 142 | 4G    | 4, <i>int.</i> x 2    |
|               |                  |                   | ".....Hall.                                              | St. G. N. Y. | II       | ... | 6     | 5, <i>int.</i> x 1.5  |
| Tr.           | 1335             | "                 | punctostriata ..H. & W.                                  | Pal. N. Y.   | 8, pt. I | 142 | 4G    | 9, "                  |
|               |                  |                   | ".....H. & C.                                            | N. Y. S. M.  | 23       | 243 | 13    | 17, <i>ext. d.</i>    |
| H. R.         | 1334             | "                 | ? pustulosa.....Hall.                                    | Pal. N. Y.   | 8, pt. I | 142 | 4G    | 11, "                 |
|               |                  |                   | rudis.....Hall.                                          | N. Y. S. M.  | 24       | 222 | ...   | ...                   |
| Tr.           | $\frac{685}{4}$  | Fig'd.            | terminalis (Con.)...Hall.                                | " "          | I        | 100 | 30    | 11a, b.               |
|               |                  |                   | ".....Hall.                                              | " "          | I        | 100 | 30    | 11c, <i>side</i>      |
| "             | $\frac{685}{1}$  | "                 | Triplecia Hall.<br>ambigua.....Hall.                     | " "          | I        | 143 | 33    | 8a-c                  |
|               |                  |                   | ".....Hall.                                              | " "          | I        | 143 | 33    | 9                     |
| "             | $\frac{711}{1}$  | Fig'd Sp and G.T. | extans (Conrad) ...Hall.                                 | " "          | I        | 137 | 33    | 1a, <i>ext. v. v.</i> |
|               |                  |                   | ".....Hall.                                              | " "          | I        | 137 | 33    | 1b, <i>ext. d. v.</i> |
| "             | "                | "                 | ".....Hall.                                              | H. & C.      | II       | ... | 18    | 4, <i>card</i>        |
|               |                  |                   | ".....Hall.                                              | Pal. N. Y.   | 8, pt. I | 269 | 11C   | 5, "                  |
| "             | "                | Fig'd.            | " (Conrad)....Hall.                                      | " "          | I        | 145 | 33    | 11a-d                 |
|               |                  |                   | ".....Hall.                                              | " "          | I        | 145 | 33    | 11a-d                 |



| LOCALITY.          | REMARKS.                                                                                 |
|--------------------|------------------------------------------------------------------------------------------|
| .....              | As <i>Streptorhynchus</i> .                                                              |
| Platteville, Wis.  | A dorsal valve, imbedded.                                                                |
| .....              | As <i>Streptorhynchus</i> .                                                              |
| Cincinnati, O.     | Entire individual.                                                                       |
| .....              | As <i>Streptorhynchus</i> ( <i>Strophonella</i> ?) <i>deltoideum</i> Con.                |
| Lebanon, O.        | Entire individual.                                                                       |
| .....              | As <i>Streptorhynchus</i> ( <i>Strophonella</i> ) <i>deltoideum</i> Con.                 |
| Lebanon, O.        | Entire individual.                                                                       |
| .....              | As <i>Streptorhynchus</i> ( <i>Strophonella</i> ) <i>deltoideum</i> Con.                 |
| Oxford, O.         | Ventral valve.                                                                           |
| Cincinnati, O.     | As <i>Leptæna</i> . Entire.                                                              |
| .....              | " <i>Streptorhynchus</i> .                                                               |
| Cincinnati, O.     | Entire individual of medium size.                                                        |
| " "                | As <i>Leptæna</i> . Two individuals of medium size.                                      |
| .....              | " "                                                                                      |
| Cincinnati, O.     | A ventral valve of medium size.                                                          |
| .....              | As <i>Streptorhynchus</i> .                                                              |
| Lebanon, O.        | A dorsal valve of medium size. Figure represents hinge $\times 2$ .                      |
| .....              | As <i>Streptorhynchus</i> .                                                              |
| .....              | A dorsal valve and a rather large ventral valve. The latter is ticketed "Cincinnati, O." |
| Lebanon, O.        | As <i>Leptæna</i> . A dorsal valve.                                                      |
| Oxford, O.         | See <i>Leptæna</i> .                                                                     |
| .....              | Locality incorrect in explanation of plate.                                              |
| Mineral Pt., Wis.  | As <i>Streptorhynchus</i> ( <i>Strophonella</i> ?) <i>deltoideum</i> Con. Imbedded.      |
| .....              | " " " " " "                                                                              |
| Janesville, Wis.   | A dorsal valve imbedded. Last figure is an enlargement $\times 3$ .                      |
| .....              | As <i>Streptorhynchus</i> ( <i>Strophonella</i> ?) <i>deltoideum</i> Con.                |
| Clifton, Wis.      | A ventral valve imbedded.                                                                |
| .....              | As <i>Triplecia</i> .                                                                    |
| .....              | Made generic type.                                                                       |
| Fort Cassin, Vt.   | Internal imprint of dorsal valve and of ventral valve with some shell.                   |
| Cincinnati, O.     | Internal cast retaining some shell. All figures enlargements $\times 2$ .                |
| " "                | A dorsal valve imbedded so as to show the interior.                                      |
| " ? "              | Rather large dorsal valve imbedded.                                                      |
| Clifton, Tenn.     | Dorsal valve preserving much shell. From the hydraulic beds.                             |
| Near Horicon, Wis. | Internal cast retaining fragments of the shell.                                          |
| .....              | See <i>Schizocrania</i> .                                                                |
| Lowville, N. Y.    | As <i>Orbicula</i> . A detached and an imb. indiv., each with some shell.                |
| Middleville, N. Y. | " " Detached individual.                                                                 |
| " "                | As <i>Atrypa</i> . Entire.                                                               |
| " "                | " " Four individuals imbedded in one block.                                              |
| " "                | " " Ventral valve imbedded.                                                              |
| .....              | " "                                                                                      |
| .....              | Generic type of <i>Triplecia</i> .                                                       |
| Middleville, N. Y. | Dorsal valve showing cardinal process.                                                   |
| " "                | As <i>Atrypa</i> sp. ? Entire, young.                                                    |





| LOCALITY.                           | REMARKS.                                                                                                                                                                                                    |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                               | As type of <i>Atrypa cuspidata</i> .                                                                                                                                                                        |
| .....                               | Generic type <i>Triplecia</i> .                                                                                                                                                                             |
| Lowville, N. Y.                     | Entire, adult.                                                                                                                                                                                              |
| " "                                 | As type of <i>Atrypa cuspidata</i> . Two entire individuals.                                                                                                                                                |
| .....                               | See <i>Syntrophia</i> .                                                                                                                                                                                     |
| Middleville, N. Y.                  | As <i>Atrypa</i> . Entire, perfect.                                                                                                                                                                         |
| Beekmantown, N. Y.                  | Two dorsal valves, imbedded.                                                                                                                                                                                |
| " "                                 | Two imbedded ventral valves used for figure.                                                                                                                                                                |
| " "                                 | Ventral valve,                                                                                                                                                                                              |
| .....                               | = <i>Triplecia</i> .                                                                                                                                                                                        |
| .....                               | As <i>Atrypa</i> .                                                                                                                                                                                          |
| Cincinnati, O.                      | Made generic type. A very small and a large individual.                                                                                                                                                     |
| Oxford, O.                          | Six specimens showing loops and spires from which the greatly enlarged figures were made.                                                                                                                   |
| Martinsburg, N. Y.                  | As <i>Atrypa</i> . Entire.                                                                                                                                                                                  |
| Loose in Wayne or Monroe Co., N. Y. | As <i>Orthis</i> . Interior casts of three individuals, small to large. Proposed as type of subgen. <i>Orthonomæa</i> in a supplementary note to 12th Rep't N. Y. S. M., not in the American Museum copies. |
| " "                                 | Internal casts of two individuals of medium and large size.                                                                                                                                                 |

Class LAMELLIBRANCHIATA.

|                        |                                                                                                              |
|------------------------|--------------------------------------------------------------------------------------------------------------|
| Adams, N. Y.           | Species probably belongs here, though referred to <i>Palæarca?</i> by Hall in 12th Rep't N. Y. S. M., p. 65. |
| Beloit, Wis.           | Two int. casts, 1 of which prob. came from Niagara gr. at Racine, Wis.                                       |
| Trenton Falls, N. Y.   | Left valve, imbedded.                                                                                        |
| .....                  | See <i>A. lamellosa</i> .                                                                                    |
| Pulaski, N. Y.         | As type of <i>A. radiata</i> . External cast left valve, imbedded.                                           |
| Oswego, Co., N. Y.     | " " " " " right " "                                                                                          |
| Pulaski, N. Y.         | " " " Exterior-int. imp. small right valve.                                                                  |
| Turin, N. Y.           | " " " " " " "                                                                                                |
| Pulaski, N. Y.         | " " " Interior imprint right valve.                                                                          |
| Cincinnati, O.         | " " " Compressed ext. cast both valves.                                                                      |
| " "                    | " " " Worn exterior cast large right valve.                                                                  |
| " "                    | " " " Fragmentary exterior imprint of very large left ? valve.                                               |
| L. Ontario, N. Y.      | External cast of both valves, found loose on south side of lake.                                             |
| .....                  | As <i>A. radiata</i> . Type.                                                                                 |
| Near Pulaski, N. Y.    | " " Very perfect internal cast right valve.                                                                  |
| .....                  | " " Type.                                                                                                    |
| .....                  | " " " "                                                                                                      |
| Lindsley's Hill, Tenn. | " " " Right valve of medium size.                                                                            |
| Beloit, Wis.           | Parts of internal casts of two right valves.                                                                 |
| .....                  | Name given in catalogue.                                                                                     |
| .....                  | As <i>A. cancellosa</i> , by mistake.                                                                        |
| Beloit, Wis.           | Internal cast left valve, imb. Two unfigured casts are in the series.                                        |
| .....                  | Name given in catalogue.                                                                                     |
| Mineral Pt., Wis.      | Internal cast left valve. One entire internal cast, unfigured.                                               |
| .....                  | Name given in catalogue.                                                                                     |
| Pte. aux Baies, Wis.   | Internal cast, nearly entire.                                                                                |

## Class LAMELLIBRANCHIATA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No. | Type or<br>Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.            | REFERENCE.               |           |          |       |                 |
|------------------|-------------|------------------------|---------------------------------------|--------------------------|-----------|----------|-------|-----------------|
|                  |             |                        |                                       | Work.                    | Vol       | P.       | Pl.   | Figs.           |
| Ch.<br>Tr.       | 536         | Type.                  | <b>Ambonychia</b> Hall—Cont.          |                          |           |          |       |                 |
|                  | 734         | "                      | mytiloides.... Hall.                  | Pal. N. Y.               | I         | 315      | 33*   | 2a, b           |
|                  | 716         | "                      | obtusa..... Hall.                     | " "                      | I         | 167      | 36    | 8a, b           |
|                  |             | "                      | orbicularis..... Hall.                | " "                      | I         | 164      | 36    | 5b-d            |
|                  | 922<br>1    | "                      | planistriata..... Hall.<br>Whitfield. | Geol. Wis.<br>Mem. A. M. | 186I<br>I | 32<br>58 | 7     | 3, 4            |
| H. R.            | 1362<br>1   | Type.                  | <b>Avicula</b> Klein.                 |                          |           |          |       |                 |
|                  |             | "                      | demissa.....                          |                          |           |          |       |                 |
|                  |             | "                      | desquamata.....                       |                          |           |          |       |                 |
|                  |             | "                      | trentonensis.....                     |                          |           |          |       |                 |
|                  |             | "                      |                                       |                          |           |          |       |                 |
| H. R.            | 1362<br>3   | Fig'd.                 | <b>Cleidophorus</b> Hall.             |                          |           |          |       |                 |
|                  | 1126<br>1   | Fig'd Sp.<br>and G. T. | neglectus..... Hall.                  | Geol. Wis.               | I         | 55       | ct 13 | 2, ext. l. v.   |
|                  | 1126<br>3   | "                      | ".....                                | " "                      | I         | 55       | ct 13 | 3, int. l. v.   |
|                  |             | "                      | planulatus (Con.)... Hall.            | Pal. N. Y.               | I         | 150      | 34    | 1g, h           |
|                  |             | "                      | ".....                                | " "                      | I         | 300      | 82    | 9b-d            |
| Tr.?             | 730<br>5    | Type.                  | <b>Cypricardites</b> Conrad.          |                          |           |          |       |                 |
|                  |             | "                      | islandicus (Hall.)... Miller          | Am. P. F.                | .....     | 189      | ..... | .....           |
|                  |             | "                      | Hall.                                 | N. Y. S. M.              | 12        | 10       | ..... | 1-3             |
|                  |             | "                      | "                                     | Pal. N. Y.               | 3         | 271      | ..... | 1-3             |
|                  |             | "                      | lata..... Hall.                       | " "                      | I         | 160      | 35    | 10a, l. v.      |
| Tr.              | 735<br>2    | "                      | niota..... Hall.                      | Geol. Wis.               | 186I      | 29       |       |                 |
|                  | 940<br>1    | "                      | ".....                                | " "                      | I         | 38       | ct. 4 | 8, int. l. v.   |
|                  |             | "                      | Whitfield.                            | Mem. A. M.               | I         | 54       | 6     | 17-20           |
|                  | 943<br>2    | "                      | rectirostris..... Hall.               | Geol. Wis.               | 186I      | 29       |       |                 |
|                  |             | "                      | Whitfield.                            | Mem. A. M.               | I         | 55       | 6     | 21, 22          |
| Tr.              | 943<br>1    | "                      | " (Hall.) Whitf.                      | " "                      | I         | 55       | 6     | 23-25           |
|                  | 942<br>1    | "                      | rotundatus..... Hall.                 | Geol. Wis.               | 186I      | 29       |       |                 |
|                  |             | "                      | ".....                                | " "                      | I         | 38       | ..... | 7, int. r. v.   |
|                  |             | "                      | Whitfield.                            | Mem. A. M.               | I         | 53       | 6     | 13-15           |
|                  |             | "                      | " (Hall.) Whitf.                      | " "                      | I         | 53       | 6     | 16              |
| Tr. or<br>H. R.  | 938<br>1    | "                      | <b>Saffordi</b> ..... Hall.           | N. Y. S. M.              | 12        | 11       | ..... | 4, 5            |
|                  |             | "                      | "                                     | Pal. N. Y.               | 3         | 271      | ..... | 4, 5            |
|                  | 732         | "                      | subspatulatus..... Hall.              | " "                      | I         | 159      | 35    | 9a, b           |
|                  | 731         | "                      | subtruncatus..... Hall.               | " "                      | I         | 156      | 35    | 3a-c            |
|                  | 730<br>1    | "                      | ventricosus..... Hall.                | " "                      | I         | 155      | 35    | 1d-f            |
| Tr.              |             | Type.                  | <b>Edmondia</b> de Koninck.           |                          |           |          |       |                 |
|                  |             | "                      | subtruncata.....                      |                          |           |          |       |                 |
|                  |             | "                      | ventricosa.....                       |                          |           |          |       |                 |
|                  |             | "                      |                                       |                          |           |          |       |                 |
|                  |             | "                      |                                       |                          |           |          |       |                 |
| Tr.              | 741         | Type.                  | <b>Goniophora</b> Phillips,           |                          |           |          |       |                 |
|                  |             | "                      | ? carinata..... Hall.                 | Pal. N. Y.               | I         | 160      | 35    | 11a, ext. r. v. |
|                  |             | "                      | "                                     | " "                      | I         | 160      | 35    | 11b, c          |
|                  |             | "                      |                                       |                          |           |          |       |                 |
|                  |             | "                      |                                       |                          |           |          |       |                 |
| H. R.            | 747<br>2    | "                      | <b>Lyrodesma</b> Conrad.              |                          |           |          |       |                 |
|                  |             | "                      | poststriatum... Emmons.               | Geol. N. Y.              | 2d D.     | 399      | ..... | 4, int. l. v.   |
|                  |             | "                      | Hall.                                 | Pal. N. Y.               | I         | 301      | 82    | 10b, "          |
|                  | 747         | Fig'd.                 | " (Emmons) H.                         | " "                      | I         | 151      | 34    | 2a, b           |
|                  |             | "                      | pulchellum.....                       |                          |           |          |       |                 |
| Tr.              |             | Type.                  | <b>Modiolopsis</b> Hall.              |                          |           |          |       |                 |
|                  | 737         | "                      | anodontoides.....                     |                          |           |          |       |                 |
|                  | 738         | "                      | arcuata..... Hall.                    | Pal. N. Y.               | I         | 159      | 35    | 8               |
|                  |             | "                      | aviculoides..... Hall.                | " "                      | I         | 161      | 36    | 1a, b           |
|                  |             | "                      | carinata.....                         |                          |           |          |       |                 |



| LOCALITY.                                                                                           | REMARKS.                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chazy, N. Y.<br>Watertown, N. Y.<br>" "                                                             | Imprint of interior of left valve.<br>Internal cast of individual.<br>" " left valve. Figs. 5b and c are evid. of the same indiv. but the striae rep. in 5d are not on orig. of 5b, as stated in expl. of pl.                                                                                                                                                                                 |
| Mineral Pt., Wis.<br>.....                                                                          | Casts of two opposite valves.<br>See <i>A. carinata</i> .                                                                                                                                                                                                                                                                                                                                     |
| .....<br>.....<br>.....                                                                             | See <i>Pterinea</i> .<br>" <i>Obolella crassa</i> .<br>" <i>Pterinea</i> .                                                                                                                                                                                                                                                                                                                    |
| Sinsinawa Mnd., Wis.<br>Near Dubuque, Ia.<br>Mineral Pt.?, Wis.<br>Turin, N. Y.<br>Waterford, N. Y. | Entire, medium size. Many others are in the series.<br>Internal cast of individual retaining some shell.<br>As type of <i>Nucula levata</i> . Internal cast, entire, rather large.<br>Imprints of left valves in shale, three specimens.<br>Interior imprint of both valves expanded. Metamorphosed shales.                                                                                   |
| .....<br>St. Joseph's Island,<br>L. Superior.<br>Carlisle, Pa.                                      | Name proposed instead of <i>C. ventricosus</i> , pre-occupied.<br>As <i>Palæarca ventricosa</i> , gen. and sp. type.<br>Ditto. Two opposite valves and an entire individual.<br>As <i>Modiolopsis</i> . Internal cast of individual.                                                                                                                                                          |
| Beloit, Wis.                                                                                        | Very perf. int. cast, entire, imb., and the int. cast of a left valve, imb.                                                                                                                                                                                                                                                                                                                   |
| Rockford, Ill.<br>Janesville, Wis.                                                                  | A very perfect internal cast in chert.<br>Two casts in limestone, the larger very perfect; pt. of orig. type ser.                                                                                                                                                                                                                                                                             |
| Beloit, Wis.                                                                                        | Entire inter. cast of indiv., and inter. cast of right valve, imbedded.                                                                                                                                                                                                                                                                                                                       |
| Janesville, Wis.                                                                                    | Another internal cast of right valve is in the type series.                                                                                                                                                                                                                                                                                                                                   |
| .....<br>Nashville, Tenn.<br>Watertown, N. Y.<br>" "                                                | Internal cast both valves imbedded. Two others are in type series.<br>As <i>Palæarca</i> .<br>" " Two large opp. valves. Eight others are in the type ser.<br>" <i>Modiolopsis</i> . Internal cast.<br>" <i>Edmondia</i> . Internal casts of a left and of a right valve and the external cast of a left valve.<br>As <i>Edmondia</i> . A nearly ent. indiv. and one ent., but vertic. compr. |
| Middleville, N. Y.<br>.....<br>.....                                                                | See <i>Cypricardites</i> .<br>" "                                                                                                                                                                                                                                                                                                                                                             |
| Middleville, N. Y.<br>" "                                                                           | As <i>Modiolopsis</i> . Entire, imbedded.<br>" " Two right valves, imbedded.                                                                                                                                                                                                                                                                                                                  |
| .....<br>Pulaski, N. Y.<br>Carlisle, Pa.<br>.....                                                   | As <i>Nuculites</i> .<br>" <i>Nucula</i> ? Internal cast of left valve, large.<br>" " External cast of individual.<br>See <i>Tellinomya</i> .                                                                                                                                                                                                                                                 |
| .....<br>Herkimer Co., N. Y.<br>Middleville, N. Y.<br>.....                                         | See <i>M. sinuata</i> .<br>Cast of interior of right valve. Generic relations uncertain.<br>" " " shell. = <i>Cypricardites</i> ?<br>See <i>Goniophora</i> .                                                                                                                                                                                                                                  |

## Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv.          | Cat. No.         | Type or Fig'd Sp.   | GENUS, SPECIES AND AUTHOR. | REFERENCE.            |       |       |       |               |
|------------------------|------------------|---------------------|----------------------------|-----------------------|-------|-------|-------|---------------|
|                        |                  |                     |                            | Work.                 | Vol.  | P.    | Pl.   | Figs.         |
| Modiolopsis Hall—Cont. |                  |                     |                            |                       |       |       |       |               |
| H. R.                  | $\frac{947}{2}$  | Type.               | curta.....Hall.            | Pal. N. Y.            | I     | 297   | 81    | 4             |
| "                      | $\frac{947}{3}$  | "                   | " .....                    | " "                   | I     | 297   | 82    | 2a            |
| Tr.                    | 947              | "                   | " .....                    | " "                   | I     | 297   | 82    | 2b, d         |
| "                      | $\frac{736}{2}$  | Fig'd.              | fabia (Con.).....Hall.     | " "                   | I     | 158   | 35    | 6b, ext.      |
| "                      | "                | "                   | " .....                    | " "                   | I     | 158   | 35    | 6c            |
| "                      | "                | "                   | " .....                    | " "                   | I     | 158   | 35    | 6d            |
| H. R.                  | $\frac{736}{4}$  | "                   | " .....                    | " "                   | I     | 298   | 82    | 4a            |
| "                      | $\frac{1130}{1}$ | Fig'd Sp. and G. T. | lata .....                 | .....                 | ..... | ..... | ..... | .....         |
| "                      | "                | "                   | modiolaris (Con.)...Hall.  | Pal. N. Y.            | I     | 294   | 81    | 1c            |
| "                      | "                | "                   | " .....                    | " "                   | I     | 294   | 81    | 1d            |
| "                      | "                | "                   | " .....                    | " "                   | I     | 294   | 81    | 1e            |
| "                      | $\frac{1130}{5}$ | "                   | " .....                    | " "                   | I     | 294   | 81    | 1f            |
| "                      | $\frac{1130}{3}$ | "                   | " .....                    | " "                   | I     | 294   | 82    | 1, r. v.      |
| Tr.                    | 739              | Fig'd.              | nasuta (Con.) .....Hall.   | " "                   | I     | 159   | 35    | 7, ext.       |
| U.                     | 1063             | Type.               | ? nuculiformis .....Hall.  | " "                   | I     | 298   | 82    | 5a            |
| H. R.                  | 1365             | "                   | pholadiformis.....Hall.    | Lake Sup.             | 2     | 213   | 30    | 1b            |
| "                      | "                | "                   | " .....                    | " "                   | 2     | 213   | 30    | 1c, r. v.     |
| Tr.                    | $\frac{950}{1}$  | "                   | plana.....Hall.            | Geol. Wis.            | 1861  | 30    |       | 1, card.      |
| "                      | "                | "                   | " .....                    | " "                   | I     | 38    |       | 6, int. r. v. |
| "                      | $\frac{950}{2}$  | "                   | " (Hall)...Whitfield.      | Mem. A. M.            | I     | 56    | 7     | 12, 13        |
| H. R.                  | 1132             | Fig'd.              | sinuata (Emmons)...Hall.   | Pal. N. Y.            | I     | 56    | 7     | 14, 15        |
| Tr.                    | 951              | Type.               | subspatulata.....          | .....                 | ..... | ..... | ..... | .....         |
| "                      | "                | "                   | ? superba .....Hall.       | Geol. Wis.            | 1861  | 31    |       | .....         |
| "                      | "                | "                   | " .....                    | Whitfield. Mem. A. M. | I     | 56    | 7     | 16-18         |
| H. R.                  | 1369             | "                   | terminalis .....Hall.      | Pal. N. Y.            | I     | 318   | 33*   | 5a, b         |
| "                      | "                | "                   | " .....                    | " "                   | I     | 297   | 81    | 5a, b         |
| "                      | "                | "                   | " .....                    | " "                   | I     | 318   |       | .....         |
| "                      | 1370             | "                   | truncata .....Hall.        | " "                   | I     | 296   | 81    | 3a, b         |
| "                      | "                | "                   | " .....                    | H. & W. Pal. Ohio.    | 2     | 86    | 2     | 13, r. v.     |
| "                      | "                | "                   | sp. ? .....                | Pal. N. Y.            | I     | 297   | 81    | 5a, b         |
| Nucula Lamarck.        |                  |                     |                            |                       |       |       |       |               |
| "                      | "                | "                   | ? donaciiformis.....       | .....                 | ..... | ..... | ..... | .....         |
| "                      | "                | "                   | fabula.....                | .....                 | ..... | ..... | ..... | .....         |
| "                      | "                | "                   | fecunda.....               | .....                 | ..... | ..... | ..... | .....         |
| "                      | "                | "                   | levata.....                | .....                 | ..... | ..... | ..... | .....         |
| "                      | "                | "                   | obliqua .....              | .....                 | ..... | ..... | ..... | .....         |
| "                      | "                | "                   | poststriata.....           | .....                 | ..... | ..... | ..... | .....         |
| Nuculites Conrad.      |                  |                     |                            |                       |       |       |       |               |
| "                      | "                | "                   | poststriatus.....          | .....                 | ..... | ..... | ..... | .....         |
| Orthodesma H & W.      |                  |                     |                            |                       |       |       |       |               |
| H. R.                  | $\frac{1373}{1}$ | Type.               | contracta .....Hall.       | Pal. N. Y.            | I     | 300   | 82    | 8a, l. v.     |
| "                      | "                | "                   | " .....                    | H. & W. Pal. Ohio.    | 2     | 96    | 2     | 4, "          |
| "                      | "                | "                   | " .....                    | Hall. Pal. N. Y.      | I     | 300   | 82    | 8b, card.     |
| "                      | $\frac{1134}{4}$ | "                   | parallela .....Hall.       | " "                   | I     | 299   | 82    | 7a, d         |
| "                      | $\frac{1134}{1}$ | "                   | " .....                    | " "                   | I     | 299   | 82    | 7b, card.     |
| "                      | "                | "                   | " .....                    | " "                   | I     | 299   | 82    | 7c            |
| Orthonota Conrad.      |                  |                     |                            |                       |       |       |       |               |
| "                      | "                | "                   | contracta .....            | .....                 | ..... | ..... | ..... | .....         |
| "                      | "                | "                   | parallela .....            | .....                 | ..... | ..... | ..... | .....         |
| Palæarca Hall.         |                  |                     |                            |                       |       |       |       |               |
| "                      | "                | "                   | Saffordi.....              | .....                 | ..... | ..... | ..... | .....         |
| "                      | "                | "                   | ventricosa.....            | .....                 | ..... | ..... | ..... | .....         |



| LOCALITY.                     | REMARKS.                                                                                                                                    |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Grimsby, Ont.                 | Exterior-interior cast of left valve, imbedded.                                                                                             |
| Lorraine, N. Y.               | “ “ “ “ “                                                                                                                                   |
| Mineral Pt., Wis.             | Entire. Lettering incorrect in explanation of plate.                                                                                        |
| Watertown, N. Y.              | Right valve, imbedded.                                                                                                                      |
| “ “                           | Cast of interior of left valve retaining small pieces of shell.                                                                             |
| “ “                           | “ “ right “ “ “ piece “                                                                                                                     |
| Pulaski, N. Y.                | “ “ “ “ small, imbedded.                                                                                                                    |
| .....                         | See <i>Cypricardites</i> .                                                                                                                  |
| Near Pulaski, N. Y.           | Exterior-interior imprint of a right valve.                                                                                                 |
| “ “                           | “ imprint of right valve.                                                                                                                   |
| “ “                           | “ -interior imprint of a left valve.                                                                                                        |
| Madison, Ind.                 | “ “ “ both valves expanded and somewhat crushed.                                                                                            |
| Ohio.                         | Cast of interior of a young individual.                                                                                                     |
| Carlisle, Pa.                 | Imbedded right valve of very young indiv. Probably = <i>Orthodesma</i> .                                                                    |
| Turin, N. Y.                  | Cast both valves expanded, imb. In 12th Rep. N.Y. S. M. is ref. to <i>Nucula</i> or <i>Tellinomya</i> , but the spec. shows no card. teeth. |
| Little Bay des Noquets, Mich. | An exterior-interior imprint of a large right valve.                                                                                        |
| “ “                           | Imperfect exterior-interior cast of a large individual.                                                                                     |
| Beloit, Wis.                  | Internal cast and exterior imprint of same right valve.                                                                                     |
| Mineral Pt., Wis.             | Internal cast, entire. Two other casts are in the type series.                                                                              |
| Rodman, N. Y.                 | As <i>M. anodontoides</i> Con. Exterior imprint both valves, expanded.                                                                      |
| .....                         | See <i>Cypricardites</i> .                                                                                                                  |
| Beloit ?, Wis.                | Two exterior-interior casts both valves, nearly perfect. = <i>Orthodesma</i> ?                                                              |
| Cincinnati, O.                | Internal cast, entire, somewhat worn.                                                                                                       |
| .....                         | As <i>M. sp.</i> ?                                                                                                                          |
| Cincinnati, O.                | Referred here to this species. Imperfect internal cast.                                                                                     |
| “ “                           | Internal cast, entire, somewhat compressed.                                                                                                 |
| .....                         | See <i>M. terminalis</i> , Hall.                                                                                                            |
| .....                         | See <i>Tellinomya</i> .                                                                                                                     |
| .....                         | “ “                                                                                                                                         |
| .....                         | “ “                                                                                                                                         |
| .....                         | “ “ <i>levata</i> , <i>T. fecunda</i> and <i>Cleidophorus neglectus</i> .                                                                   |
| .....                         | “ <i>Tellinomya</i> .                                                                                                                       |
| .....                         | “ <i>Lyrodesma</i> .                                                                                                                        |
| .....                         | “ “                                                                                                                                         |
| .....                         | “ “                                                                                                                                         |
| Cincinnati, O.                | As <i>Orthonota</i> . Exterior-interior cast of individual.                                                                                 |
| “ “                           | “ “ “ “ “                                                                                                                                   |
| “ “                           | “ “ Worn internal cast of small individual.                                                                                                 |
| Pulaski, N. Y.                | “ “ Imperfect internal cast, imbedded.                                                                                                      |
| “ “                           | “ “ Imbedded external cast left valve.                                                                                                      |
| .....                         | See <i>Orthodesma</i> .                                                                                                                     |
| .....                         | “ “                                                                                                                                         |
| .....                         | = <i>Cypricardites</i> .                                                                                                                    |
| .....                         | See “                                                                                                                                       |
| .....                         | “ “ <i>islandicus</i> .                                                                                                                     |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.                | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                | REFERENCE.  |      |     |       |                     |
|---------------|-------------------------|--------------------|-------------------------------------------|-------------|------|-----|-------|---------------------|
|               |                         |                    |                                           | Work.       | Vol. | P.  | Pl.   | Figs.               |
| H. R. Tr.     | 1123<br>$\frac{719}{1}$ | Fig'd.             | <b>Pterinea</b> Goldfuss.                 |             |      |     |       |                     |
|               |                         |                    | demissa ( <i>Con.</i> )..... <i>Hall.</i> | Pal. N. Y.  | I    | 292 | 80    | 2b, <i>ext.</i>     |
|               |                         |                    | trentonensis ( <i>Con.</i> ) <i>Hall.</i> | " "         | I    | 161 | 36    | 2b-d                |
|               |                         |                    | <b>Tellinomya</b> Hall.                   |             |      |     |       |                     |
| "             | $\frac{728}{4}$         | Type.              | alta .....                                | Geol. Wis.  | 1861 | 27  |       |                     |
|               |                         |                    | <i>Whitfield.</i>                         | Mem. A. M.  | I    | 50  | 6     | 5, <i>l. v.</i>     |
| "             | $\frac{728}{3}$         | "                  | " ( <i>Hall.</i> )..... <i>Whitfield.</i> | " "         | I    | 50  | 6     | 6-8                 |
|               |                         |                    | <i>anatiniformis</i> .....                |             |      |     |       |                     |
|               |                         |                    | <i>cuneata</i> .....                      |             |      |     |       |                     |
| Tr.           | $\frac{721}{1}$         | Type.              | donaciformis..... <i>Hall.</i>            | Pal. N. Y.  | I    | 316 | 33*   | 3a, b               |
| "             | $\frac{726}{1}$         | "                  | dubia .....                               | " "         | I    | 153 | 34    | 6a-d                |
| H. R.         | 1361                    | "                  | ? fabula .....                            | Am. J. Sci. | 48   | 295 |       |                     |
| "             | $\frac{1360}{5}$        | "                  | fecunda..... <i>Hall.</i>                 | Geol. Wis.  | I    | 55  | ct.13 | 1, <i>r. v.</i>     |
| "             | $\frac{1360}{6}$        | Fig'd.             | " .....                                   | Pal. N. Y.  | I    | 150 | 34    | 1i, <i>l. v.</i>    |
| Tr.           | $\frac{725}{1}$         | Type.              | gibbosa....                               | " "         | I    | 153 | 34    | 5a, b               |
| "             | "                       | Fig'd.             | " .....                                   | " "         | I    | 153 | 34    | 6e, f               |
| "             | 937                     | Type.              | inflata ....                              | Geol. Wis.  | 1861 | 26  |       |                     |
|               |                         |                    | <i>Whitfield.</i>                         | " "         | I    | 38  |       | 4, 5                |
|               |                         |                    | <i>Whitfield.</i>                         | Mem. A. M.  | I    | 49  | 6     | 10-12               |
| "             | $\frac{724}{1}$         | "                  | levata..... <i>Hall.</i>                  | Pal. N. Y.  | I    | 150 | 34    | 1c-e, k             |
| "             | $\frac{723}{1}$         | Gen. and Sp. Type. | nasuta .....                              | " "         | I    | 152 | 34    | 3a, <i>ext.</i>     |
|               |                         |                    | " .....                                   | Geol. Wis.  | I    | 38  |       | 1, "                |
| "             | "                       | "                  | " .....                                   | Pal. N. Y.  | I    | 152 | 34    | 3b, c               |
| H. R.         | $\frac{1063}{2}$        | Type.              | ? nuculiformis..... <i>Hall.</i>          | " "         | I    | 298 | 82    | 5b                  |
| "             | 1362                    | "                  | ? obliqua..... <i>Hall.</i>               | Am. J. Sci. | 48   | 294 |       |                     |
| Tr.           | 936                     | "                  | ovata..... <i>Hall.</i>                   | Geol. Wis.  | 1861 | 28  |       |                     |
|               |                         |                    | <i>Whitfield.</i>                         | Mem. A. M.  | I    | 52  | 6     | 9                   |
| U.            | 1064                    | "                  | pulchella..... <i>Hall.</i>               | Pal. N. Y.  | I    | 302 | 82    | 12a, b              |
| H. R.         | 1127                    | "                  | " .....                                   | " "         | I    | 302 | 82    | 12c, d              |
| Tr.           | 722                     | "                  | sanguinolaroidea.... <i>Hall.</i>         | " "         | I    | 152 | 34    | 4a, b               |
| "             | $\frac{935}{1}$         | "                  | ventricosa .....                          | Geol. Wis.  | 1861 | 27  |       |                     |
|               |                         |                    | <i>Whitfield.</i>                         | " "         | I    | 38  |       | 3, <i>int. r v.</i> |
|               |                         |                    | <i>Whitfield.</i>                         | Mem. A. M.  | I    | 51  | 6     | 1-4                 |

Class GASTROPODA.

|        |                  |        |                                            |             |   |     |    |                 |
|--------|------------------|--------|--------------------------------------------|-------------|---|-----|----|-----------------|
|        |                  |        | <b>Bellerophon</b> Montfort.               |             |   |     |    |                 |
| Tr.    | $\frac{781}{1}$  | Fig'd. | bilobatus ( <i>Sow.</i> ).... <i>Hall.</i> | Pal. N. Y.  | I | 184 | 40 | 3a, b           |
|        |                  |        | " .....                                    | Geol. Wis.  | I | 39  |    | 7               |
| H. R.  | $\frac{781}{11}$ | "      | " .....                                    | Pal. N. Y.  | I | 307 | 83 | 9a, c, d        |
| Tr.    | 783              | Type.  | " var. acutus <i>Hall.</i>                 | " "         | I | 185 | 40 | 4a, b           |
| "      | "                | "      | " .....                                    | " "         | I | 185 | 40 | 5a, b           |
| "      | 782              | "      | " "corrugatus"                             | " "         | I | 185 | 40 | 6a, <i>rear</i> |
| "      | "                | " ?    | " .....                                    | " "         | I | 185 | 40 | 6b, c           |
| Ft. C. | 471              | "      | cassinensis .... <i>Whitfield.</i>         | A. M. N. H. | I | 318 | 26 | 8, 9            |
|        |                  |        | <b>Bucania</b> Hall.                       |             |   |     |    |                 |
| Tr.    | $\frac{787}{1}$  | "      | bidorsata . .... <i>Hall.</i>              | Pal. N. Y.  | I | 186 | 40 | 8a, b           |
|        |                  |        | " .....                                    | Geol. Wis.  | I | 39  |    | 6               |
| "      | $\frac{787}{2}$  | "      | " .....                                    | Pal. N. Y.  | I | 186 | 40 | 8c-g            |
| Ch.    | 569              | "      | champlainensis.... <i>Whitf.</i>           | A. M. N. H. | 9 | 181 | 4  | 14-16           |
| Tr.    | $\frac{785}{2}$  | "      | expansa..... <i>Hall.</i>                  | Pal. N. Y.  | I | 186 | 40 | 7a-c            |
|        |                  |        | " .....                                    | Geol. Wis.  | I | 40  |    | 1               |



| LOCALITY.                                                                                                                                                                                                                | REMARKS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Near Rome, N. Y.<br>Middleville, N. Y.                                                                                                                                                                                   | As <i>Avicula</i> . Exterior imprint of a left valve.<br>" " A right and two left valves, imbedded. The spec. design. by Prof. Hall as the orig. of the last fig. is not exactly like it.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Dodgeville, Wis.<br>Mineral Pt., Wis.<br>.....<br>.....<br>Middleville, N. Y.<br>" "<br>Cincinnati, O.<br>Scales' Mound, Ill.<br>Mineral Pt.?, Wis.<br>Middleville, N. Y.<br>" "                                         | Internal cast of both valves, entire.<br>Entire internal cast. Figs. 6 and 7 are enlargements. Several other internal casts from these localities and Beloit are in the type series.<br>See <i>Pterotheca anatiformis</i> .<br>" <i>T. nasuta</i> .<br>As <i>Nucula</i> ? Slickensided internal cast both valves.<br>Two entire individuals and a left valve. See <i>T. gibbosa</i> , also.<br>As <i>Nucula</i> . Several minute internal casts form the series.<br>" " ( <i>Tellinomya</i> ). Exterior-interior cast, entire.<br>" type of <i>Nucula levata</i> . Internal cast, entire.<br>Internal cast of both valves.<br>As type of <i>T. dubia</i> . Right valve, imbedded.        |
| Mineral Pt., Wis.<br>Middleville, N. Y.<br><br>" "<br>" "<br>Waterford, N. Y.<br>Cincinnati, O.<br><br>Beloit, Wis.<br>Near Watertown, N. Y.<br>Waterford, N. Y.<br>Middleville, N. Y.<br>.....<br>.....<br>Beloit, Wis. | Individual, nearly perfect.<br>As <i>Nucula</i> . Internal casts of three individuals.<br><br>" <i>T. cuneata</i> by mistake. Right valve, imbedded.<br>Internal cast of individual.<br>As <i>Modiolopsis</i> ? External cast small right valve.<br>" <i>Nucula</i> . Several minute casts are in the series.<br><br>Internal cast right valve, imbedded.<br>As <i>Lyrodesma</i> . Exterior-interior cast, imbedded.<br>" " Internal cast from the metamorphic shale.<br>Internal cast of individual.<br>Internal casts of two opposite valves, of a small individual and of a large one. Five other internal casts from this locality and one from near Dubuque, Ia. are in the series. |
| Middleville, N. Y.<br>Pulaski, N. Y.<br>Middleville, N. Y.<br>" "<br>" "<br>" "<br>Fort Cassin, Vt.                                                                                                                      | Internal cast.<br>Two internal casts. The figures should have been lettered 9a, b, c.<br>Imbedded individual.<br>Free.<br>A plaster cast of a very perfect individual.<br>Imbedded. Uncertain whether this or a specimen in the N. Y. State Museum, in Albany, is the one illustrated.<br>Nearly entire internal cast retaining some shell.                                                                                                                                                                                                                                                                                                                                              |
| Middleville, N. Y.<br>Watertown, N. Y.<br>Valcour Island, Vt.<br><br>Watertown, N. Y.                                                                                                                                    | Entire.<br>Two internal casts, one of which retains some shell.<br>Three individuals imbedded. From bed "C" of Brainerd & Seely.<br><br>Two individuals used in making the figures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.             | REFERENCE.  |      |     |     |                                        |
|---------------|------------------|---------------------|----------------------------------------|-------------|------|-----|-----|----------------------------------------|
|               |                  |                     |                                        | Work.       | Vol. | P.  | Pl. | Figs.                                  |
|               |                  |                     | <b>Bucania</b> Hall— <i>Continued.</i> |             |      |     |     |                                        |
| Tr.           | $\frac{786}{1}$  | Type.               | punctifrons . . . . . Hall.            | Pal. N. Y.  | I    | 187 | 40A | 1a-e                                   |
| "             | "                | Fig'd.              | " . . . . . "                          | " "         | I    | 78  | 26  | 9a, b                                  |
| Ch.           | 550              | Type.               | rotundata . . . . . Hall.              | " "         | I    | 33  | 6   | 11a, b                                 |
| "             | "                | "                   | " . . . . . "                          | " "         | I    | 33  | 6   | 11c, <sup>vert.</sup> <sub>sect.</sub> |
| Ca.?          | 386              | "                   | tripla . . . . . Whitfield.            | A. M. N. H. | 2    | 55  | 9   | 12, 13                                 |
|               |                  |                     | <b>Calaurops</b> Whitfield.            |             |      |     |     |                                        |
| Ch.           | $\frac{470}{1}$  | Gen. and Sp. Type   | lituiformis . . . . Whitfield.         | " "         | I    | 315 | 26  | 1-4                                    |
|               |                  |                     | <b>Capulus</b> Montfort.               |             |      |     |     |                                        |
|               |                  |                     | <i>auriformis</i> . . . . .            |             |      |     |     |                                        |
|               |                  |                     | <b>Carinaropsis</b> Hall.              |             |      |     |     |                                        |
| Tr.           | 779              | "                   | carinata . . . . . Hall.               | Pal. N. Y.  | I    | 183 | 40  | 1a-c                                   |
|               |                  |                     | <i>cymbula</i> . . . . .               |             |      |     |     |                                        |
| H. R.         | 1138             | Type.               | orbiculata . . . . . Hall.             | Pal. N. Y.  | I    | 306 | 83  | 8a-c                                   |
| Tr.           | 780              | "                   | patelliformis . . . . Hall.            | " "         | I    | 183 | 40  | 2a, b                                  |
| H. R.         | $\frac{780}{3}$  | "                   | " . . . . . "                          | " "         | I    | 306 | 83  | 7a, b                                  |
|               |                  |                     | <b>Clisospira</b> Billings.            |             |      |     |     |                                        |
| Ft. C.        | 450              | "                   | lirata . . . . . Whitfield.            | A. M. N. H. | I    | 308 | 24  | 16, 17                                 |
|               |                  |                     | <b>Cyclonema</b> Hall.                 |             |      |     |     |                                        |
| H. R.         | $\frac{1379}{1}$ | Fig'd Sp. and G. T. | bilix ( <i>Conrad</i> ). . . . Hall.   | Pal. N. Y.  | I    | 305 | 83  | 4a-e                                   |
| Tr.           | 752              | Type.               | percarinatum . . . . Hall.             | " "         | I    | 177 | 38  | 4, <i>back</i>                         |
| H. R.         | $\frac{1380}{1}$ | "                   | varicosum . . . . . Hall.              | N. Y. S. M. | 14   | 91  |     |                                        |
|               |                  |                     | " . . . . .                            | " "         | 24   |     | 8   | 2, <i>frt.</i>                         |
|               |                  |                     | <i>ventricosum</i> . . . . .           |             |      |     |     |                                        |
|               |                  |                     | <b>Cyclora</b> Hall.                   |             |      |     |     |                                        |
| "             | 1387             | Gen. and Sp. Type.  | minuta . . . . . Hall.                 | Am. J. Sci. | 48   | 294 |     |                                        |
| "             | 1386             | Type.               | parvula . . . . . Hall.                | " "         | 48   | 294 |     |                                        |
|               |                  |                     | <b>Cyrtolites</b> Conrad.              |             |      |     |     |                                        |
| Tr.           | $\frac{777}{1}$  | Fig'd.              | compressus ( <i>Con.</i> ) . . Hall.   | Pal. N. Y.  | I    | 188 | 40A | 2a, b                                  |
|               |                  |                     | " . . . . .                            | Geol. Wis.  | I    | 40  |     | 4                                      |
|               |                  |                     | <i>filosum</i> . . . . .               |             |      |     |     |                                        |
| H. R.         | 1139             | Fig'd.              | ornatus ( <i>Con.</i> ) . . . . Hall.  | Pal. N. Y.  | I    | 308 | 84  | 1a, b                                  |
| "             | "                | "                   | " " . . . . . "                        | " "         | I    | 308 | 84  | 1d                                     |
| "             | "                | "                   | " " . . . . . "                        | " "         | I    | 308 | 84  | 1e, f (?)                              |
| "             | "                | "                   | " " . . . . . "                        | " "         | I    | 308 | 84  | 1g                                     |
|               |                  |                     | <i>trentonensis</i> . . . . .          |             |      |     |     |                                        |
|               |                  |                     | <b>Ecculiomphalus</b> Portlock.        |             |      |     |     |                                        |
| Ca.           | 584              | Type.               | compressus. . . . . Whitfield.         | A. M. N. H. | 9    | 180 | 4   | 13                                     |
| "             | 369              | "                   | priscus . . . . . Whitfield.           | " "         | 2    | 46  | 8   | 19, 20                                 |
| Tr.           | $\frac{776}{1}$  | Fig'd.              | trentonensis ( <i>Con.</i> ) . . Hall. | Pal. N. Y.  | I    | 189 | 40A | 3a, b, d                               |
| "             | $\frac{776}{2}$  | "                   | " " . . . . . "                        | " "         | I    | 189 | 41  | 1a-c                                   |
| Ft. C.        | 459              | Type.               | triangulus. . . . . Whitfield.         | A. M. N. H. | 3    | 29  | I   | 5-9                                    |
| Tr.           | 969              | "                   | undulatus . . . . . Hall.              | Geol. Wis.  | 1861 | 37  |     |                                        |
|               |                  |                     | " . . . . . Whitfield.                 | Mem. A. M.  | I    | 63  | 8   | 1-3                                    |
| Ft. C.        | 458              | "                   | volutatus . . . . . Whitfield.         | A. M. N. H. | I    | 314 | 25  | 8                                      |
| "             | "                | "                   | " . . . . . "                          | " "         | I    | 314 | 25  | 9-11                                   |



| LOCALITY.                                                                                              | REMARKS.                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Middleville, N. Y.<br>Lowville, N. Y.<br>Chazy, N. Y.<br>" "<br>Providence Island, Vt.                 | Three individuals, one of which is imbedded.<br>As type of <i>Retepora foliacea</i> . A crushed individual.<br>Internal cast retaining some shell.<br>Imbedded individual showing nearly central vertical section.<br>Small individual.                                 |
| Fort Cassin, Vt.<br><br>.....                                                                          | Three internal casts with some shell and a fragment showing surface.<br><br>See <i>Platystoma</i> .                                                                                                                                                                     |
| Middleville, N. Y.<br>.....<br>Waterford, N. Y.<br>Middleville, N. Y.<br>Pulaski, N. Y.                | Two imbedded individuals.<br>See <i>Phragmostoma</i> .<br>Exterior-interior casts of two individuals, imbedded.<br>Imbedded.<br>Exterior-interior cast of large individual, imbedded.                                                                                   |
| Fort Cassin, Vt.                                                                                       | Well preserved, but lacking summit whorl, imbedded.                                                                                                                                                                                                                     |
| Cincinnati, O.<br>Middleville, N. Y.<br>.....<br>Tennessee.<br>.....                                   | As <i>Pleurotomaria</i> ? Three entire individuals, one imbedded.<br>" " Attached through aperture.<br>As <i>C. ventricosum</i> by mistake.<br>Very large, nearly entire.<br>See <i>C. varicosum</i> .                                                                  |
| Cincinnati, O.<br>" "                                                                                  | Many minute shells and casts form the series.<br>As <i>Turbo</i> (?). Many minute individuals.                                                                                                                                                                          |
| Middleville, N. Y.<br>.....<br>Pulaski, N. Y.<br>" "<br>" "<br>" "<br>" "<br>.....                     | Individual with most of shell preserved.<br>See <i>Cyrtoceras</i> .<br>Interior cast of rather large individual.<br>" " individual of medium size, some shell.<br>Imperfect internal cast retaining some shell.<br>Small internal cast.<br>See <i>Ecculiomphalus</i> .. |
| Colchester, Vt.<br>Beekmantown, N. Y.<br>Middleville, N. Y.<br>Carlisle, Pa.<br>Providence Island, Vt. | Imbedded individual retaining part of shell.<br>Internal cast. Matrix shows the thickness of the shell.<br>As <i>Cyrtolites</i> . Two imbedded individuals.<br>" " Free.<br>Two internal casts. Figs. 5 and 6 are partial restorations.                                 |
| Beloit, Wis.<br>Fort Cassin, Vt.<br>" "                                                                | Internal cast of outer whorl.<br>Two internal casts which were used for the figure.<br>Large internal cast, partly restored in figure.                                                                                                                                  |

## Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                     | REFERENCE.  |       |       |       |                  |
|---------------|------------------|--------------------|------------------------------------------------|-------------|-------|-------|-------|------------------|
|               |                  |                    |                                                | Work.       | Vol.  | P.    | Pl.   | Figs.            |
|               |                  |                    | <b>Euomphalus</b> Sowerby.                     |             |       |       |       |                  |
| Ca.           | 370              | Type.              | calciferus . . . . . <i>Whitfield.</i>         | A. M. N. H. | 2     | 47    | 8     | 12, 13           |
| Ft. C.        | 460              | "                  | circumcliratus . . <i>Whitfield.</i>           | " "         | 1     | 308   | 24    | 18-21            |
| "             | 461              | "                  | Perkinsi . . . . . <i>Whitfield.</i>           | " "         | 3     | 30    | 1     | 10-11, 14        |
| "             | "                | "                  | " . . . . . "                                  | " "         | 3     | 30    | 1     | 12, 13           |
| Tr.           | $\frac{964}{2}$  | "                  | triliratus . . . . . <i>Conrad.</i>            | P. A. N. S. | 1     | 333   | ....  | .....            |
|               |                  |                    | <b>Fusispira</b> Hall.                         |             |       |       |       |                  |
| "             | 968              | "                  | elongata . . . . . <i>Hall.</i>                | N. Y. S. M. | 24    | 229   | 8     | 5, <i>frt.</i>   |
|               |                  |                    | <i>obeliscus</i> . . . . .                     | .....       | ..... | ..... | ..... | .....            |
| Tr.           | $\frac{774}{1}$  | Type.              | subfusiformis . . . . <i>Hall.</i>             | Pal. N. Y.  | 1     | 180   | 39    | 2a, b            |
| "             | $\frac{774}{4}$  | "                  | " . . . . . "                                  | " "         | 1     | 180   | 39    | 2c, <i>frt.</i>  |
| H. R.         | $\frac{967}{3}$  | "                  | terebriformis . . . . <i>Hall.</i>             | N. Y. S. M. | 24    | 230   | 8     | 4, "             |
| Tr.           | 966              | "                  | ventricosa . . . . . <i>Hall.</i>              | " "         | 24    | 229   | 8     | 6, "             |
| "             | 773              | "                  | vittata . . . . . <i>Hall.</i>                 | Pal. N. Y.  | 1     | 181   | 39    | 3a, b            |
|               |                  |                    | <b>Helicotoma</b> Salter.                      |             |       |       |       |                  |
| "             | $\frac{775}{2}$  | Fig'd.             | planulata ( <i>Salt.</i> ) . . <i>Hall.</i>    | Geol. Wis.  | 1     | 39    | ....  | 3, <i>top</i>    |
| Ca.?          | 454              | Type.              | similis . . . . . <i>Whitfield.</i>            | A. M. N. H. | 3     | 31    | 1     | 1, 2             |
|               |                  |                    | <b>Holopea</b> Hall.                           |             |       |       |       |                  |
| Ft. C.        | 462              | Fig'd.             | arenaria ( <i>Bill.</i> ) <i>Whitfield.</i>    | A. M. N. H. | 1     | 310   | 25    | 5, <i>back</i>   |
| "             | 463              | Type.              | cassina . . . . . <i>Whitfield.</i>            | " "         | 1     | 310   | 25    | 6, 7             |
| Ca.           | 376              | "                  | diluculum . . . . . <i>Hall.</i>               | Pal. N. Y.  | 1     | 12    | 3     | 7                |
| Tr.           | 749              | "                  | obliqua . . . . . <i>Hall.</i>                 | " "         | 1     | 170   | 37    | 2a-c             |
| "             | 751              | Gen. and Sp. Type. | symmetrica . . . . . <i>Hall.</i>              | " "         | 1     | 170   | 37    | 1, <i>back</i>   |
| Ca.           | 375              | Fig'd.             | turgida ( <i>Hall</i> ) <i>Whitfield.</i>      | A. M. N. H. | 2     | 50    | 9     | 3-7              |
| Tr.           | 750              | Type.              | ventricosa . . . . . <i>Hall.</i>              | Pal. N. Y.  | 1     | 171   | 37    | 4a, b            |
| Be.           | 577              | Fig'd.             | sp. . . . . <i>Hall.</i>                       | " "         | 1     | 42    | 10    | 5                |
|               |                  |                    | <b>Lophospira</b> Whitfield.                   |             |       |       |       |                  |
| Ca.           | 377              | Type.              | calcifera . . . . . <i>Whitfield.</i>          | A. M. N. H. | 2     | 55    | 9     | 8-11             |
| Ft. C.        | 464              | "                  | cassina . . . . . <i>Whitfield.</i>            | " "         | 1     | 312   | 25    | 1-4              |
| Tr.           | $\frac{763}{1}$  | Gen. and Sp. Type. | Milleri . . . . . <i>Hall.</i>                 | Am. P. F.   | ..... | 244   | ....  | .....            |
| "             | $\frac{763}{2}$  | "                  | " . . . . . "                                  | Pal. N. Y.  | 1     | 177   | 38    | 5a, b, d-f       |
| "             | "                | "                  | " . . . . . "                                  | " "         | 1     | 177   | 38    | 5g, h            |
| Be.           | 578              | Type.              | perangulata . . . . . <i>Hall.</i>             | " "         | 1     | 41    | 10    | 4, <i>side.</i>  |
| Tr.           | 767a             | "                  | " . . . . . "                                  | " "         | 1     | 179   | 38    | 7a, b            |
| "             | $\frac{767}{2}$  | "                  | tricarinata . . . . . <i>Hall.</i>             | " "         | 1     | 178   | 38    | 6a-c             |
| "             | 766              | "                  | uniangulata . . . . . <i>Hall.</i>             | " "         | 1     | 179   | 38    | 8, <i>rear</i>   |
| H. R.         | $\frac{1136}{3}$ | "                  | " var. abbreviata "                            | " "         | 1     | 304   | 83    | 2a, <i>side</i>  |
| "             | "                | "                  | " " " "                                        | " "         | 1     | 304   | 83    | 2d, "            |
|               |                  |                    | <b>Maclurea</b> Le Sueur.                      |             |       |       |       |                  |
| Ft. C.        | $\frac{457}{1}$  | Fig'd.             | acuminata ( <i>Bill.</i> ) <i>Whitf.</i>       | A. M. N. H. | 3     | 32    | 2     | 1, 2             |
| "             | $\frac{456}{3}$  | "                  | affinis ( <i>Bill.</i> ) . . <i>Whitfield.</i> | " "         | 9     | 180   | 4     | 8, 9             |
| Tr.           | $\frac{965}{2}$  | Type.              | Bigsbyi . . . . . <i>Hall.</i>                 | Geol. Wis.  | 1861  | 37    |       |                  |
| "             | "                | "                  | " ( <i>Hall</i> ) <i>Whitfield.</i>            | Mem. A. M.  | 1     | 62    | 8     | 12, 13, 15       |
| "             | $\frac{965}{6}$  | "                  | " ( <i>Hall</i> ) <i>Whitfield.</i>            | " "         | 1     | 62    | 8     | 14, <i>top</i>   |
| Ch.           | $\frac{547}{1}$  | Fig'd.             | magna ( <i>Le Sueur</i> ) . . <i>Hall.</i>     | Pal. N. Y.  | 1     | 26    | 5     | 1c, "            |
| "             | "                | "                  | " " " "                                        | " "         | 1     | 26    | 5     | 1e, <i>sect.</i> |
| "             | "                | "                  | " " " "                                        | " "         | 1     | 26    | 5 bis | 1a, "            |
| Ca.           | $\frac{383}{1}$  | Type.              | matutina . . . . . <i>Hall.</i>                | " "         | 1     | 10    | 3     | 3, "             |
| "             | 382              | Fig'd.             | sordida ( <i>Hall</i> ) <i>Whitfield.</i>      | A. M. N. H. | 2     | 49    | 8     | 1, 2             |
| "             | "                | "                  | " " " "                                        | " "         | 2     | 49    | 8     | 3, 4             |
|               |                  |                    | <b>Metoptoma</b> Phillips.                     |             |       |       |       |                  |
| "             | 363              | Type.              | alta . . . . . <i>Whitfield.</i>               | " "         | 2     | 44    | 7     | 12, 13           |



| LOCALITY.            | REMARKS.                                                                  |
|----------------------|---------------------------------------------------------------------------|
| Beekmantown, N. Y.   | Two individuals.                                                          |
| Fort Cassin, Vt.     | Internal cast retaining small portion of shell.                           |
| “ “                  | “ “ some of shell.                                                        |
| “ “                  | “ Free.                                                                   |
| Mineral Pt., Wis.    | Small individual retaining shell.                                         |
| Elkader, Ia.         | External cast of lowest four whorls. From Galena horizon.                 |
| .....                | See <i>Murchisonia</i> .                                                  |
| Middleville, N. Y.   | As <i>Murchisonia</i> . Internal cast.                                    |
| Adams, N. Y.         | “ “ Imperfect cast of large individual.                                   |
| Cincinnati, O.       | A somewhat imperfect internal cast, adult.                                |
| Depere, Wis.         | External cast, adult. From Galena horizon.                                |
| Turin, N. Y.         | As <i>Murchisonia</i> . Internal cast.                                    |
| Beloit, Wis.         | Internal cast imbedded.                                                   |
| Shoreham, Vt.        | “ From above Ft. Cassin beds.                                             |
| Fort Cassin, Vt.     | Internal cast of a large individual.                                      |
| “ “                  | Large internal cast retaining small portion of shell.                     |
| Middleville, N. Y.   | As <i>Turbo</i> . Internal cast imbedded.                                 |
| “ “                  | Two specimens.                                                            |
| “ “                  | Well preserved, imbedded.                                                 |
| Beekmantown, N. Y.   | Three individuals.                                                        |
| Middleville, N. Y.   | External cast.                                                            |
| Watertown, N. Y.     | As <i>Natica?</i> sp. Small internal cast, imbedded.                      |
| Beekmantown, N. Y.   | Two individuals.                                                          |
| Fort Cassin, Vt.     | Three more or less perfect internal casts.                                |
| .....                | Specific name proposed instead of <i>Murchisonia bicincta</i> , preoc.    |
| Middleville, N. Y.   | As <i>Murchisonia bicincta</i> H. Two individuals and an internal cast.   |
| Watertown, N. Y.     | “ “ “ Ind. imb. These specs. were made                                    |
| “ “                  | the generic type of <i>Lophospira</i> , Bul. A. M. N. H., vol. I, p. 311. |
| “ “                  | As <i>Murchisonia</i> . Cast of individual, imbedded.                     |
| Middleville, N. Y.   | “ “ <i>perangulata</i> , var. <i>A</i> . Individual imbedded.             |
| Mineral Pt., Wis.    | “ “ A somewhat compressed indiv. and a fragment.                          |
| Middleville, N. Y.   | “ “ An individual.                                                        |
| Pulaski, N. Y.       | “ “ Internal cast imbedded with type of <i>Murchisonia</i>                |
| .....                | <i>gracilis</i> , fig. 1a, same plate.                                    |
| Mohawk Valley, N. Y. | As <i>Murchisonia</i> . Internal cast, imbedded.                          |
| Fort Cassin, Vt.     | Internal cast retaining small portion of shell.                           |
| Otter Creek, Vt.     | Two considerable fragments preserving shell.                              |
| Mineral Pt., Wis.    | A small internal cast and a large one preserving external features.       |
| Janesville, Wis.     | Internal cast of medium size. Three other casts are in the series.        |
| Chazy, N. Y.         | Large individual, somewhat imperfect and weathered.                       |
| “ “                  | Weathered horizontal section of individual, medium size.                  |
| “ “                  | Imbedded individual giving vertical section near the middle.              |
| Mohawk Valley, N. Y. | Large weathered individual, imbedded.                                     |
| Beekmantown, N. Y.   | Two adults preserving more or less shell, imbedded.                       |
| “ “                  | Internal cast retaining small portion of shell.                           |
| “ “                  | An individual.                                                            |

Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                  | REFERENCE.  |             |       |       |                 |
|---------------|------------------|--------------------|-------------------------------------------------------------|-------------|-------------|-------|-------|-----------------|
|               |                  |                    |                                                             | Work.       | Vol.        | P.    | Pl.   | Figs.           |
| H. R.         | 1395             | Gen. and Sp. Type. | <b>Microceras</b> Hall.....<br>inornatum.....Hall.          | Am. J. Sci. | 48          | 294   | ..... | .....           |
| Tr.           | $\frac{768}{1}$  | Type.              | <b>Murchisonia</b> d'A. & V.<br>bellicincta.....Hall        | Pal. N. Y.  | I           | 179   | 39    | 1a, b, d, e     |
| "             | $\frac{768}{2}$  | "                  | " .....                                                     | " "         | I           | 179   | 39    | 1c, <i>frt.</i> |
| Ft. C.        | 507              | Type.              | <i>bicincta</i> .....                                       | .....       | .....       | ..... | ..... | .....           |
| Ca.?          | 379              | "                  | cassina.....Whitfield.                                      | A. M. N. H. | 9           | 179   | 4     | 7               |
| "             | "                | "                  | ? confusa . . . . .Whitfield.                               | " "         | 2           | 54    | 8     | 16, 17          |
| "             | 380              | "                  | " .....                                                     | " "         | 2           | 54    | 8     | 18              |
| Ca.           | "                | "                  | gracilens.....Whitfield.                                    | " "         | 2           | 53    | 8     | 14              |
| Tr.           | $\frac{765}{1}$  | "                  | " .....                                                     | " "         | 2           | 53    | 8     | 15              |
| H. R.         | $\frac{1136}{1}$ | "                  | gracilis.....Hall.                                          | Pal. N. Y.  | I           | 181   | 39    | 4a, c           |
| "             | $\frac{765}{9}$  | "                  | " .....                                                     | " "         | I           | 303   | 83    | 1a              |
| Tr.           | $\frac{1030}{1}$ | "                  | " .....                                                     | " "         | I           | 303   | 83    | I               |
|               |                  | "                  | major .....                                                 | Lake Sup.   | 2           | 209   | 26    | 1a              |
|               |                  | "                  | <i>Milleri</i> .....                                        | .....       | .....       | ..... | ..... | .....           |
| Ft. C.        | 465              | Type.              | obeliscus.....Whitfield.                                    | A. M. N. H. | I           | 317   | 26    | 5, 6            |
| "             | 466              | "                  | ? prava.....Whitfield.                                      | " "         | I           | 316   | 24    | 22, <i>rear</i> |
|               |                  | "                  | <i>subfusiformis</i> .....                                  | .....       | .....       | ..... | ..... | .....           |
|               |                  | "                  | <i>vittata</i> .....                                        | .....       | .....       | ..... | ..... | .....           |
|               |                  | "                  | <b>Natica</b> Adanson.<br>? sp.....                         | Pal. N. Y.  | I           | 42    | 10    | 5               |
| Ca.           | $\frac{372}{3}$  | Fig'd.             | <b>Ophileta</b> Vanuxem.<br>complanata ( <i>Vanux.</i> ) W. | A. M. N. H. | 2           | 48    | 7     | 18-25           |
| H. R.?        | 977              | Type.              | <b>Phragmostoma</b> Hall.<br>cymbula .....                  | Hall.       | N. Y. S. M. | 14    | 94    | .....           |
| Ch.           | 563              | "                  | <b>Platystoma</b> Conrad.<br>auriformis.....Hall.           | Pal. N. Y.  | I           | 31    | 6     | 9a, b           |
| Ca.           | 381              | "                  | <b>Pleurotomaria</b> Defrance.<br>beekmanensis..Whitfield.  | A. M. N. H. | 2           | 53    | 8     | 8-11            |
| Ft. C.        | 468              | Type.              | ? <i>bilix</i> .....                                        | .....       | .....       | ..... | ..... | .....           |
| "             | 467              | Fig'd.             | difficilis . . . . .Whitfield.                              | A. M. N. H. | 3           | 33    | I     | 17, 18          |
|               |                  | "                  | ? etna ( <i>Bill.</i> ) ? Whitfield.                        | " "         | I           | 316   | 24    | 12, 13          |
|               |                  | "                  | <i>micula</i> .....                                         | .....       | .....       | ..... | ..... | .....           |
|               |                  | "                  | <i>Nasoni</i> .....                                         | .....       | .....       | ..... | ..... | .....           |
| Tr.           | 757a             | Type.              | niota.....Hall.                                             | Geol. Wis.  | 1861        | 33    |       |                 |
|               |                  | "                  | " .....                                                     | Whitfield.  | Mem. A. M.  | I     | 60    | 8               |
| Be.           | 576              | "                  | ? nucleolata.....Hall.                                      | Pal. N. Y.  | I           | 42    | 10    | 11              |
|               |                  | "                  | <i>percarinata</i> .....                                    | .....       | .....       | ..... | ..... | 6a, b           |
|               |                  | "                  | <i>rotuloides</i> .....                                     | .....       | .....       | ..... | ..... | .....           |
| H. R.?        | 1028             | Type.              | semele .....                                                | Hall.       | Geol. Wis.  | 1861  | 36    |                 |
|               |                  | "                  | " .....                                                     | Whitfield.  | Mem. A. M.  | I     | 61    | 8               |
| Tr.           | $\frac{757}{2}$  | "                  | subconica.....Hall.                                         | Pal. N. Y.  | I           | 174   | 37    | 8-10            |
| "             | "                | "                  | " .....                                                     | " "         | I           | 174   | 37    | 8a-c            |
|               |                  | "                  | " .....                                                     | " "         | I           | 174   | 37    | 8d, e           |
| H. R.         | $\frac{757}{11}$ | "                  | " .....                                                     | Geol. Wis.  | I           | 39    | ..... | 1, <i>back</i>  |
|               |                  | "                  | " .....                                                     | Pal. N. Y.  | I           | 304   | 83    | 3c, d           |
|               |                  | "                  | <i>subtilistriata</i> .....                                 | .....       | .....       | ..... | ..... | .....           |
|               |                  | "                  | <i>umbilicata</i> .....                                     | .....       | .....       | ..... | ..... | .....           |
| H. R.         | 1137             | Fig'd.             | sp. ?.....Hall.                                             | Pal. N. Y.  | I           | 305   | 83    | 5b, <i>base</i> |
|               |                  | "                  | sp. ?.....                                                  | " "         | I           | 31    | 6     | 8               |
|               |                  | "                  | <b>Rhaphistoma</b> Hall.<br>compressum . . . . .Whitfield.  | A. M. N. H. | I           | 309   | 24    | 14, 15          |
| Ft. C.        | 452              | Type.              | hortensia ( <i>Bill.</i> ) ? Whitf.                         | " "         | 3           | 32    | I     | 15, 16          |
| "             | 451              | Fig'd.             | <i>micula</i> .....                                         | Hall.       | Geol. Wis.  | I     | 55    | ct 13           |
| H. R.         | $\frac{1383}{1}$ | Type.              |                                                             |             |             |       |       | 4, <i>top</i>   |



| LOCALITY.                            | REMARKS.                                                                       |
|--------------------------------------|--------------------------------------------------------------------------------|
| .....<br>Cincinnati, O.              | Prob. = <i>Cyrtolites</i> .<br>Many minute individuals form the series.        |
| Middletown, N. Y.                    | Two individuals and a large internal cast.                                     |
| Watertown, N. Y.                     | Cast showing form of aperture.                                                 |
| .....                                | See <i>Lophospira Milleri</i> .                                                |
| Fort Cassin, Vt.                     | Incomplete shell, imbedded.                                                    |
| Shoreham, Vt.                        | Two casts retaining some shell ; imbedded separately.                          |
| " "                                  | Weathered slab, part of which was figured.                                     |
| Providence Island, Vt.               | Individual imbedded with type of <i>Isochilina Seelyi</i> , fig. 6, pl. 13.    |
| Beekmantown, N. Y.                   | Internal cast of six volutions, imbedded.                                      |
| Watertown, N. Y.                     | Two internal casts, one of which retains some shell.                           |
| Pulaski, N. Y.                       | Int. cast imb. with type of <i>Lophospira abbreviata</i> , fig. 2a, same pl.   |
| Lorraine, N. Y.                      | Int. cast, imb. Two unfigured specimens are in the type series.                |
| 3 miles above Green Bay,<br>L. Mich. | Internal cast five whorls, imbedded. From the Galena horizon.                  |
| .....                                | See <i>Lophospira</i> .                                                        |
| Fort Cassin, Vt.                     | Large int. cast retaining small portion of shell. Prob. = <i>Fusispira</i> .   |
| " "                                  | Internal cast retaining but little shell.                                      |
| .....                                | See <i>Fusispira</i> .                                                         |
| .....                                | " "                                                                            |
| .....                                | See <i>Holopea</i> .                                                           |
| Beekmantown, N. Y.                   | Four individuals and a block containing many.                                  |
| Allen's Bluff, Tenn.                 | As <i>Carinaropsis</i> ( <i>Phragmostoma</i> ). Marg. somew. broken. Trenton ? |
| Galway, N. Y.                        | As <i>Capulus</i> . Cast, somewhat worn.                                       |
| Beekmantown, N. Y.                   | A nearly entire individual retaining some shell, and an internal cast.         |
| .....                                | See <i>Cyclonema</i> .                                                         |
| Fort Cassin, Vt.                     | Internal cast retaining some shell.                                            |
| " "                                  | " "                                                                            |
| .....                                | See <i>Rhaphistoma</i> .                                                       |
| .....                                | " "                                                                            |
| Beloit, Wis.                         | Internal cast of a large individual, nearly entire.                            |
| Watertown, N. Y.                     | Cast of small individual, imbedded.                                            |
| .....                                | See <i>Cyclonema</i> .                                                         |
| .....                                | " <i>Rhaphistoma</i> .                                                         |
| Maquoketa Creek, Ia.                 | Int. cast retaining some shell. From shales above Galena limest.               |
| Watertown, N. Y.                     | Imbedded.                                                                      |
| " "                                  | Cast of exterior.                                                              |
| Pulaski, N. Y.                       | Two imperfect casts imbedded together in hard shale.                           |
| .....                                | See <i>Rhaphistoma</i> .                                                       |
| .....                                | " <i>Trochonema</i> .                                                          |
| Turin, N. Y.                         | Small cast, imbedded.                                                          |
| .....                                | See <i>Rhaphistoma stamineum</i> .                                             |
| Fort Cassin, Vt.                     | Internal cast retaining much of shell.                                         |
| " "                                  | Large internal cast retaining some shell.                                      |
| Sinsinawa M'nd., Wis.                | As <i>Pleurotomaria</i> . Rather large internal cast.                          |

Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.                    | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.     | REFERENCE.  |       |       |       |             |
|---------------|-----------------------------|-------------------|--------------------------------|-------------|-------|-------|-------|-------------|
|               |                             |                   |                                | Work.       | Vol.  | P.    | Pl.   | Figs.       |
| Tr.           | 960                         | Type.             | <b>Rhaphistoma</b> Hall—Cont.  |             |       |       |       |             |
|               |                             |                   | Nasoni.....Hall.               | Geol. Wis.  | 1861  | 34    | ..... | .....       |
|               |                             |                   | “ “ Whitfield.                 | “ “         | I     | 39    | ....  | 2, top      |
|               |                             |                   |                                | Mem. A. M.  | I     | 61    | 8     | 4-7         |
| Ch.           | 543                         | “                 | planistria.....Hall.           | Pal. N. Y.  | I     | 30    | 6     | 3a, top     |
| Ca.           | 366                         | “                 | prævium.....Whitfield.         | A. M. N. H. | 2     | 52    | 8     | 5-7         |
| Tr.           | 761                         | “                 | rotuloides.....Hall.           | Pal. N. Y.  | I     | 173   | 37    | 7a-c        |
| Ch.           | 545                         | “                 | stamineum.....Hall.            | “ “         | I     | 29    | 6     | 4, side     |
| “             | “                           | Fig'd.            | “ “ “                          | “ “         | I     | 31    | 6     | 8, “        |
| Tr.           | $\frac{760}{2}$             | Type.             | subtilistriatum.....Hall.      | “ “         | I     | 172   | 37    | 5a-d        |
| Ca.           | 585                         | “                 | <b>Straparollina</b> Billings. |             |       |       |       |             |
|               |                             |                   | minima.....Whitfield.          | A. M. N. H. | 9     | 179   | 4     | 10-12       |
|               |                             |                   |                                |             |       |       |       |             |
| Tr.           | $\frac{772}{\frac{771}{1}}$ | Fig'd.            | <b>Subulites</b> Conrad.       |             |       |       |       |             |
|               |                             |                   | abbreviatus.....Hall.          | N. Y. S. M. | 3     | 172   | 3     | 2a, b       |
|               |                             |                   | elongatus (Con.)....Hall.      | Pal. N. Y.  | I     | 182   | 39    | 5b, frt.    |
| “             | $\frac{771}{4}$             | “                 | “ “ “                          | “ “         | I     | 182   | 39    | 5c, side    |
| Ft. C.        | 469                         | Type.             | obesus.....Whitfield.          | A. M. N. H. | I     | 318   | 26    | 7, “        |
| Ca.           | 378                         | “                 | <b>Trochonema</b> Salter.      |             |       |       |       |             |
|               |                             |                   | exile.....Whitfield.           | “ “         | 2     | 51    | 9     | I, 2        |
|               |                             |                   | umbilicatum.....Hall.          | Pal. N. Y.  | I     | 43    | 10    | 9a, b, d, e |
| Be or B R.    | 579                         | “                 | “ “ “                          | “ “         | I     | 175   | 38    | 1a, back    |
| Tr.           | $\frac{753}{1}$             | “                 | “ “ “                          | “ “         | I     | 175   | 38    | 1b, c       |
| “             | “                           | “                 | “ “ “                          | “ “         | I     | 175   | 38    | 1d-f        |
| “             | $\frac{753}{6}$             | “                 | “ “ “                          | “ “         | I     | 175   | 38    | 1g, side    |
| Ca.           | 364                         | “                 | <b>Tryblidium</b> Lindström.   |             |       |       |       |             |
|               |                             |                   | ? acutum.....Whitfield.        | A. M. N. H. | 2     | 45    | 7     | 9-11        |
|               |                             |                   | conicum.....Whitfield.         | “ “         | I     | 306   | 24    | 26, 27      |
| Ft. C.        | 447                         | “                 | “ “ “                          | “ “         | I     | 306   | 24    | 32, 33      |
| “             | “                           | “                 | “ “ “                          | “ “         | 3     | 29    | I     | 3, side     |
| “             | “                           | “                 | “ “ “                          | “ “         | 3     | 29    | I     | 4, “        |
| “             | 445                         | “                 | ovale.....Whitfield.           | “ “         | I     | 305   | 24    | 28, 29      |
| “             | 446                         | “                 | ovatum.....Whitfield.          | “ “         | I     | 305   | 24    | 23, 24      |
| “             | “                           | “                 | “ “ “                          | “ “         | I     | 305   | 24    | 25          |
| Ca.           | 365                         | “                 | pileolum.....Whitfield.        | “ “         | 2     | 46    | 7     | 15, 16      |
| “             | “                           | “                 | “ “ “                          | “ “         | 2     | 46    | 7     | 17, top     |
| Ft. C.        | 448                         | Fig'd.            | simplex (Bill.) Whitfield.     | “ “         | I     | 306   | 24    | 30, 31      |
|               |                             |                   | <b>Turbo</b> Klein.            |             |       |       |       |             |
|               |                             |                   | diluculum.....                 | .....       | ..... | ..... | ..... | .....       |
|               |                             |                   | parvulus.....                  | .....       | ..... | ..... | ..... | .....       |

Class PTEROPODA.

|     |     |       |                            |            |       |       |       |          |
|-----|-----|-------|----------------------------|------------|-------|-------|-------|----------|
|     |     |       | <i>Cloderma</i> Hall. .... | .....      | ..... | ..... | ..... | .....    |
|     |     |       | canaliculatum.....         | .....      | ..... | ..... | ..... | .....    |
|     |     |       | Saffordi.....              | .....      | ..... | ..... | ..... | .....    |
| Tr. | 789 | Type. | <b>Conularia</b> Miller.   |            |       |       |       |          |
|     |     |       | gracilis.....Hall.         | Pal. N. Y. | I     | 224   | 59    | 7a, b    |
|     |     |       | granulata.....Hall.        | “ “        | I     | 223   | 59    | 5a, b    |
|     |     |       | papillata.....Hall.        | “ “        | I     | 223   | 59    | 6a, b    |
|     |     |       | trentonensis.....Hall.     | “ “        | I     | 222   | 59    | 4b, ext. |
| “   | “   | “     | “ “ “                      | “ “        | I     | 222   | 59    | 4d, e, f |



| LOCALITY.          | REMARKS.                                                                                                                |
|--------------------|-------------------------------------------------------------------------------------------------------------------------|
| .....              | As <i>Pleurotomaria</i> .                                                                                               |
| .....              | " <i>Rhaphistoma</i> ( <i>Pleurotomaria</i> ).                                                                          |
| Beloit, Wis.       | " <i>Pleurotomaria</i> ( <i>Rhaphistoma</i> ). Two very perfect internal casts.<br>Four others are in the type series.  |
| Chazy, N. Y.       | Imbedded individual.                                                                                                    |
| Beekmantown, N. Y. | Large individual.                                                                                                       |
| Middleville, N. Y. | As <i>Pleurotomaria</i> . Individual.                                                                                   |
| Chazy, N. Y.       | A somewhat worn individual.                                                                                             |
| " "                | As <i>Pleurotomaria</i> sp. ? Small, imbedded.                                                                          |
| Watertown, N. Y.   | " " Two individuals preserving some shell.                                                                              |
| Colchester, Vt.    | Two weathered individuals.                                                                                              |
| Watertown, N. Y.   | Fragment.                                                                                                               |
| Middleville, N. Y. | Internal cast preserving some shell.                                                                                    |
| Mineral Pt., Wis.  | Four whorls retaining some shell.                                                                                       |
| Fort Cassin, Vt.   | Rather large internal cast with some shell.                                                                             |
| Beekmantown, N. Y. | Internal cast.                                                                                                          |
| Watertown, N. Y.   | As <i>Pleurotomaria</i> . Three internal casts, two with some shell.                                                    |
| Middleville, N. Y. | " " Retains some shell.                                                                                                 |
| " "                | " " Small individual.                                                                                                   |
| " "                | " " Large internal cast.                                                                                                |
| Mineral Pt., Wis.  | " " Medium size, imbedded.                                                                                              |
| Beekmantown, N. Y. | Exfoliated individual, imbedded.                                                                                        |
| Fort Cassin, Vt.   | Internal cast of small individual imbedded.                                                                             |
| " "                | " " very "                                                                                                              |
| " "                | Individual of medium size.                                                                                              |
| " "                | Internal cast of large individual.                                                                                      |
| " "                | " " " " imbedded.                                                                                                       |
| " "                | " " retaining part of the shell.                                                                                        |
| " "                |                                                                                                                         |
| Beekmantown, N. Y. | Large ovate individual retaining much of shell.                                                                         |
| " "                | " round "                                                                                                               |
| Fort Cassin, Vt.   | Internal cast very large individual with small part of shell.                                                           |
| .....              | See <i>Holopea</i> .                                                                                                    |
| .....              | " <i>Cyclora</i> .                                                                                                      |
| .....              | = <i>Pterotheca</i> .                                                                                                   |
| .....              | See "                                                                                                                   |
| .....              | " "                                                                                                                     |
| Middleville, N. Y. | Imbedded.                                                                                                               |
| " "                | " compressed.                                                                                                           |
| " "                | "                                                                                                                       |
| " "                | Individual, free.                                                                                                       |
| " "                | Frag. showing septum. This is the orig. of the upper figure 4f.<br>Another individual, imbedded, is in the type series. |

## Class PTEROPODA—Continued.

| Geol. Subdiv. | Cat. No.        | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                               | REFERENCE.  |       |       |       |         |
|---------------|-----------------|-------------------|----------------------------------------------------------|-------------|-------|-------|-------|---------|
|               |                 |                   |                                                          | Work.       | Vol.  | P.    | Pl.   | Figs.   |
| Tr.           | 796             | Type.             | <b>Pterotheca</b> Salter.<br>anatiformis . . . . . Hall. | Pal. N. Y.  | I     | 154   | 34    | 7, ext. |
| "             | 793             | "                 | canaliculata . . . . . Hall                              | N. Y. S. M. | 14    | 97    | ....  | .....   |
| "             | 976             | "                 | Saffordi . . . . . Hall.                                 | " "         | 14    | 96    | ....  | .....   |
|               |                 |                   | "                                                        | " "         | 15    | 166   | 6     | 15-17   |
| Ch.           | $\frac{539}{1}$ | "                 | <b>Stenotheca</b> Hicks.<br>dubia . . . . . Hall.        | Pal. N. Y.  | I     | 23    | 4 bis | 11a, b  |
| "             | "               | Fig'd.            | " " " "                                                  | " "         | I     | 23    | 4 bis | 10a, b  |
|               |                 |                   | <b>Tentaculites</b> Schlotheim.<br>? flexuosus . . . . . | .....       | ..... | ..... | ..... | .....   |

## Class CEPHALOPODA.

|              |                 |        |                                                                 |             |       |       |       |          |
|--------------|-----------------|--------|-----------------------------------------------------------------|-------------|-------|-------|-------|----------|
| Tr.          | 800             | Type.  | <b>Actinoceras</b> Bronn.<br>distans . . . . . Hall.            | Pal. N. Y.  | I     | 220   | 58    | 1a, b    |
| "            | 812             | "      | <b>Cameroceas</b> Conrad.<br>approximatum . . . . . Hall.       | " "         | I     | 219   | 54    | 2a, side |
| "            | 815             | Fig'd. | trentonense (Con.).. Hall.                                      | " "         | I     | 221   | 56    | 4a-c     |
| Ft. C.       | 483             | Type.  | <b>Cyrtoceras</b> Goldfuss.<br>acinacellum . . . . . Whitfield. | A. M. N. H. | I     | 327   | 27    | 10-13    |
|              |                 |        | annulatum . . . . .                                             | .....       | ..... | ..... | ..... | .....    |
|              |                 |        | arcuatum . . . . .                                              | .....       | ..... | ..... | ..... | .....    |
| Ca.          | 389             | "      | beekmanense . . . . . Whitfield.                                | A. M. N. H. | 2     | 57    | 10    | 2, 3     |
| Chaz. Ft. C. | 481             | "      | Boycii . . . . . Whitfield.                                     | " "         | I     | 326   | 29    | 4        |
| Tr.          | 816             | "      | camurum . . . . . Hall.                                         | Pal. N. Y.  | I     | 196   | 42    | 6        |
| Ft. C.       | 482             | "      | confertissimum . . . . . Whitf.                                 | A. M. N. H. | I     | 327   | 27    | 7-9      |
| Tr.          | $\frac{818}{1}$ | "      | constrictostriatum . . . . . Hall.                              | Pal. N. Y.  | I     | 195   | 42    | 2a, b    |
| "            | "               | "      | " " " "                                                         | " "         | I     | 195   | 42    | 3c, d    |
|              |                 |        | corniculum . . . . .                                            | .....       | ..... | ..... | ..... | .....    |
| Tr.          | $\frac{991}{1}$ | Type.  | eugium . . . . . Hall.                                          | Geol. Wis.  | 1861  | 40    |       |          |
|              |                 |        | Whitfield.                                                      | Mem. A. M.  | I     | 66    | 9     | 3, 4     |
| "            | $\frac{817}{1}$ | "      | filosum (Con.).. Emmons.                                        | Geol. N. Y. | 2d D. | 392   | ....  | 4        |
|              |                 |        | Hall.                                                           | Pal. N. Y.  | I     | 190   | 41    | 3a, b    |
| "            | 823             | "      | Hallanum . . . . . d'Orbigny.                                   | Pr. d. Pal. | I     | I     | ....  | ....     |
|              |                 |        | Hall.                                                           | Pal. N. Y.  | I     | 193   | 41    | 2a-c     |
| Ca.          | 391             | "      | Kirbyi . . . . . Whitfield.                                     | A. M. N. H. | 2     | 57    | 10    | 4-7      |
|              |                 |        | lamellosum . . . . .                                            | .....       | ..... | ..... | ..... | .....    |
| Tr.          | $\frac{993}{1}$ | "      | loculosum . . . . . Hall.                                       | Geol. Wis.  | 1861  | 42    |       |          |
|              |                 |        | Whitfield.                                                      | Mem. A. M.  | I     | 67    | 9     | 6-9      |
| "            | $\frac{822}{3}$ | "      | macrostomum . . . . . Hall.                                     | Pal. N. Y.  | I     | 194   | 42    | 1b, c    |
|              |                 |        | Conrad.                                                         | P. A. N. S. | I     | 334   | ....  | .....    |
| "            | $\frac{822}{1}$ | "      | " " " "                                                         | Pal. N. Y.  | I     | 194   | 42    | 1a       |
| "            | $\frac{822}{2}$ | "      | " " " "                                                         | " "         | I     | 194   | 42    | 3a, b    |
|              |                 |        | marginale . . . . .                                             | .....       | ..... | ..... | ..... | .....    |
| Tr.          | 820             | Type.  | multicameratum . . . . . Hall.                                  | Pal. N. Y.  | I     | 195   | 42    | 4, side  |
| "            | $\frac{992}{2}$ | "      | neleus . . . . . Hall.                                          | Geol. Wis.  | 1861  | 40    |       |          |
|              |                 |        | Whitfield.                                                      | Mem. A. M.  | I     | 65    | 9     | 10, 11   |
| "            | $\frac{992}{1}$ | "      | " (Hall) " "                                                    | " "         | I     | ....  | 9     | 12       |
| Ca.          | 390             | "      | Raei . . . . . Whitfield.                                       | A. M. N. H. | 2     | 58    | 10    | 8, 9     |
| Tr.          | $\frac{821}{2}$ | "      | subannulatum . . . . . d'Orb.                                   | Pr. d. Pal. | I     | I     | ....  | .....    |
|              |                 |        | Hall.                                                           | Pal. N. Y.  | I     | 194   | 41    | 4a       |
| "            | $\frac{821}{1}$ | "      | " " " "                                                         | " "         | I     | 194   | 41    | 4b, d    |
| "            | "               | "      | " " " "                                                         | " "         | I     | 194   | 41    | 5        |



| LOCALITY.          | REMARKS.                                                                                                                         |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Watertown, N. Y.   | As <i>Tellinomya anatiniiformis</i> . Changed to <i>Clioderma anatiformis</i> , at p. 98 of 14th Rep. N. Y. S. M. Internal cast. |
| Middleville, N. Y. | As <i>Clioderma</i> . Four fragmentary internal casts form the series.                                                           |
| .....              | As generic type of <i>Clioderma</i> .                                                                                            |
| Lebanon, Tenn.     | A nearly entire individual.                                                                                                      |
| Chazy, N. Y.       | As <i>Metoptoma</i> ? Imbedded. An unfigured indiv. is in the type ser.                                                          |
| “ “                | As type of <i>Orbicula</i> ? <i>deformata</i> , cast imbedded.                                                                   |
| .....              | See <i>Conchicolites</i> .                                                                                                       |
| Turin, N. Y.       | As <i>Endoceras</i> . Large weathered cast of ten chambers. The specimen shows the siphonal rays in the beaded siphon.           |
| Middleville, N. Y. | As <i>Endoceras</i> . Fragment of a few chambers.                                                                                |
| “ “                | Small fragment and an imbedded cast, with siphon largely denuded.                                                                |
| Fort Cassin, Vt.   | A cast of interior retaining some of shell.                                                                                      |
| .....              | See <i>C. subannulatum</i> .                                                                                                     |
| .....              | “ “ <i>subarcuatum</i> .                                                                                                         |
| Beekmantown, N. Y. | Cast of twenty chambers besides most of that of habitation.                                                                      |
| Isle la Motte, Vt. | Imbedded individual of medium size, showing section.                                                                             |
| Middleville, N. Y. | Cast of about twelve chambers besides that of habitation, imbedded.                                                              |
| Fort Cassin, Vt.   | “ “ twenty-five chambers, imbedded.                                                                                              |
| Middleville, N. Y. | “ eight chambers besides that of habitation.                                                                                     |
| “ “                | “ about four chambers retaining most of shell.                                                                                   |
| .....              | See <i>C. tenuistriatum</i> .                                                                                                    |
| Beloit, Wis.       | Fragm. cast of nine chambers. Another fragm. is in the series.                                                                   |
| Watertown, N. Y.   | As <i>Cyrtolites</i> . Imbedded indiv. Shows more than fig. indicates.                                                           |
| .....              | Name proposed for <i>C. lamellosum</i> , which was preoccupied.                                                                  |
| Middleville, N. Y. | As type of <i>C. lamellosum</i> . Imbedded.                                                                                      |
| Beekmantown, N. Y. | Cast of about 23 chambers besides that of habitation.                                                                            |
| .....              | See <i>C. Hallanum</i> .                                                                                                         |
| Near Madison, Wis. | Two internal casts, one showing 36 chambers.                                                                                     |
| Mineral Pt., Wis.  | As type of <i>S. marginale</i> ; name preoccupied. Cast of 24 chambers besides that of habitation.                               |
| Carlisle, Pa.      | Cast of 13 chambers retaining some of shell. Imbedded.                                                                           |
| Middleville, N. Y. | “ 9 “ “ “ “                                                                                                                      |
| .....              | See <i>C. macrostomum</i> .                                                                                                      |
| Middleville, N. Y. | Cast, imbedded.                                                                                                                  |
| Platteville, Wis.  | Cast of 21 chambers besides part of that of habitation.                                                                          |
| Beloit, Wis.       | As <i>C. tenuistriatum</i> , by error. Internal cast.                                                                            |
| Beekmantown, N. Y. | Cast of about 12 chambers and part of that of habitation.                                                                        |
| .....              | Name proposed for <i>C. annulatum</i> , which was preoccupied.                                                                   |
| Watertown, N. Y.   | As type of <i>C. annulatum</i> . Cast, imbedded.                                                                                 |
| Middleville, N. Y. | Do. Eleven chambers retaining shell, imbedded.                                                                                   |
| “ “                | Do. Ten “ “ some of shell.                                                                                                       |

Class CEPHALOPODA—Continued.

| Geol. Subdiv. | Cat. No.          | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                                   | REFERENCE.                |            |           |               |               |
|---------------|-------------------|-------------------|----------------------------------------------------------------------------------------------|---------------------------|------------|-----------|---------------|---------------|
|               |                   |                   |                                                                                              | Work.                     | Vol.       | P.        | Pl.           | Figs.         |
| Tr.           | 819               | Type.             | <b>Cyrtoceras</b> Goldfuss— <i>Cont.</i><br>subarcuatum... <i>d'Orbigny.</i><br><i>Hall.</i> | Pr. d. Pal.<br>Pal. N. Y. | I<br>I     | 2<br>196  | ...<br>42     | .....<br>5a-c |
| "             | <u>995</u><br>1   | "                 | tenuistriatum..... <i>Hall.</i><br>"                                                         | Am. P. F.<br>Geol. Wis.   | .....<br>I | 243<br>41 | .....<br>.... | .....<br>I, 2 |
| H. R.         | 1400              | "                 | Whitneyi..... <i>Hall.</i><br><i>Whitfield.</i>                                              | " "<br>Mem. A. M.         | 1861<br>I  | 39<br>65  | <br>9         | <br>5         |
| Tr.           | 814               | "                 | <b>Endoceras</b> Hall.<br>angusticameratum... <i>Hall.</i>                                   | Pal. N. Y.                | I          | 218       | 51            | 3             |
| "             | 811               | "                 | annulatum..... <i>Hall.</i><br><i>approximatum</i> .....                                     | " "<br>.....              | I<br>..... | 207       | 44            | 1a, b         |
| Tr.           | 813               | Type.             | arctiventrum..... <i>Hall.</i><br><i>distans</i> .....                                       | Pal. N. Y.<br>.....       | I<br>..... | 217       | 51            | 2a, b         |
| B. R.         | 608               | Type.             | gemelliparum..... <i>Hall.</i>                                                               | Pal. N. Y.                | I          | 60        | 19            | 1a-c          |
| Tr.           | 810               | "                 | magniventrum..... <i>Hall.</i>                                                               | " "                       | I          | 218       | 53            | 1a-c          |
| "             | "                 | "                 | " ? var.. "                                                                                  | " "                       | I          | 218       | 54            | 2b            |
| "             | <u>809</u><br>1   | "                 | proteiforme..... <i>Hall.</i>                                                                | " "                       | I          | 208       | 48            | I             |
| "             | "                 | "                 | " .....                                                                                      | " "                       | I          | 208       | 48            | 2a-c          |
| "             | "                 | "                 | " .....                                                                                      | " "                       | I          | 208       | 48            | 3             |
| "             | "                 | "                 | " .....                                                                                      | " "                       | I          | 208       | 48            | 4a-c          |
| "             | "                 | "                 | " .....                                                                                      | " "                       | I          | 208       | 49            | 1a            |
| "             | "                 | "                 | " .....                                                                                      | " "                       | I          | 208       | 49            | 1b, c         |
| "             | "                 | "                 | " .....                                                                                      | " "                       | I          | 208       | 49            | 1e            |
| "             | "                 | "                 | " .....                                                                                      | " "                       | I          | 208       | 50            | 1a, b, 2a, b  |
| "             | "                 | "                 | " .....                                                                                      | " "                       | I          | 208       | 50            | 2d            |
| "             | "                 | "                 | " .....                                                                                      | " "                       | I          | 208       | 50            | 3             |
| "             | "                 | "                 | " .....                                                                                      | " "                       | I          | 208       | 53            | 2             |
| "             | "                 | "                 | " .....                                                                                      | " "                       | I          | 216       | 57            | 1a, b         |
| "             | <u>809</u><br>1   | "                 | " var. lineolatum "                                                                          | " "                       | I          | 211       | 45            | 4a, b         |
| "             | "                 | "                 | " " " "                                                                                      | " "                       | I          | 211       | 45            | 4e            |
| "             | "                 | "                 | " " " "                                                                                      | " "                       | I          | 211       | 46            | 1a-c          |
| "             | "                 | "                 | " " " "                                                                                      | " "                       | I          | 211       | 46            | 2a, b         |
| "             | "                 | "                 | " " " "                                                                                      | " "                       | I          | 211       | 47            | 4a, d         |
| "             | "                 | "                 | " " " "                                                                                      | " "                       | I          | 211       | 47            | 4e            |
| "             | "                 | "                 | " " " "                                                                                      | " "                       | I          | 211       | 59            | 3             |
| "             | <u>809 b</u><br>1 | "                 | " "strangulatum "                                                                            | " "                       | I          | 212       | 46            | 4a, b         |
| "             | "                 | "                 | " " " "                                                                                      | " "                       | I          | 212       | 46            | 4d            |
| "             | "                 | "                 | " " " "                                                                                      | " "                       | I          | 212       | 46            | 4e            |
| "             | <u>809 d</u><br>1 | "                 | " "tenuistriatum "                                                                           | " "                       | I          | 209       | 45            | 1a, b         |
| "             | "                 | "                 | " " " "                                                                                      | " "                       | I          | 209       | 47            | 1a, b         |
| "             | "                 | "                 | " " " "                                                                                      | " "                       | I          | 209       | 47            | 2a-e          |
| "             | <u>809 c</u><br>1 | "                 | " "tenuitextum "                                                                             | " "                       | I          | 210       | 45            | 2a, b         |
| "             | "                 | "                 | " " " "                                                                                      | " "                       | I          | 210       | 45            | 3a, b         |
| "             | "                 | "                 | " " " "                                                                                      | " "                       | I          | 210       | 45            | 5a-c          |
| B. R.         | 603               | Gen. and Sp.Type. | subcentrale..... <i>Hall.</i>                                                                | " "                       | I          | 59        | 17            | 4             |
| Ft. C.        | 480               | Type.             | <b>Gomphoceras</b> Sowerby.<br>cassinense..... <i>Whitfield.</i>                             | A. M. N. H.               | I          | 322       | 29            | 1-3           |
| "             | 479               | "                 | minimum..... <i>Whitfield.</i>                                                               | " "                       | I          | 321       | 27            | 3-5           |
| B. R.         | <u>607</u><br>1   | Gen. and Sp.Type. | <b>Gonioceras</b> Hall.<br>anceps..... <i>Hall.</i>                                          | Pal. N. Y.                | I          | 54        | 14            | 1a            |
| "             | "                 | "                 | " " "                                                                                        | " "                       | I          | 54        | 14            | 1b            |
| Tr.           | <u>990</u><br>2   | Type.             | occidentale... .. <i>Hall.</i><br><i>Whitfield.</i>                                          | Geol. Wis.<br>Mem. A. M.  | 1861<br>I  | 47<br>72  | <br>12        | <br>2         |
| "             | <u>990</u><br>4   | Fig'd.            | " (H.) "                                                                                     | " "                       | I          | 72        | 12            | I             |





Class CEPHALOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.   | REFERENCE.  |       |       |         |          |
|---------------|------------------|--------------------|------------------------------|-------------|-------|-------|---------|----------|
|               |                  |                    |                              | Work.       | Vol.  | P.    | Pl.     | Figs.    |
|               |                  |                    | <i>Inachus</i> Hisinger.     |             |       |       |         |          |
|               |                  |                    | <i>undatus</i> .....         | .....       | ..... | ..... | .....   | .....    |
|               |                  |                    | <b>Lituites</b> Breynius.    |             |       |       |         |          |
| Ft. C.        | 486              | Type.              | Eatoni..... Whitfield.       | A. M. N. H. | I     | 331   | 28      | 7        |
| "             | "                | "                  | ".....                       | " "         | I     | 331   | 32      | I        |
| "             | 487              | "                  | " var. cassinensis "         | " "         | I     | 332   | 32      | 2        |
| "             | 488              | "                  | internistriatus . Whitfield. | " "         | I     | 332   | 29      | 5, 8     |
| "             | "                | "                  | ".....                       | " "         | I     | 332   | 29      | 6, 7     |
| Tr.           | $\frac{1003}{2}$ | "                  | Robertsoni..... Hall.        | Geol. Wis.  | 186I  | 38    |         |          |
|               |                  |                    | Whitfield.                   | Mem. A. M.  | I     | 64    | 10      | 4-6      |
| Ft. C.        | 485              | "                  | Seelyi..... Whitfield.       | A. M. N. H. | I     | 330   | 31      | 2, sect. |
| "             | "                | "                  | ".....                       | " "         | I     | 330   | 32      | 3        |
| B. R.         | 829              | "                  | undatus (Con.).. Emmons.     | Geol. N. Y. | 2d D. | 394   | ct. 104 | I and 2  |
| "             |                  |                    | Hall.                        | Pal. N. Y.  | I     | 52    | 13      | I        |
| "             | 609              | Fig'd.             | " (Con.)... Hall.            | " "         | I     | 52    | 13      | 3, sect. |
| "             | "                | "                  | ".....                       | " "         | I     | 52    | 13bis   | I        |
| Tr.           | $\frac{1002}{1}$ | Type.              | " var. occidentalis. Hall.   | Geol. Wis.  | 186I  | 38    |         |          |
|               |                  |                    | Whitfield.                   | Mem. A. M.  | I     | 63    | 10      | 7        |
| "             | $\frac{1002}{5}$ | Fig'd.             | " " " (H.) "                 | " "         | I     | 63    | 11      | I        |
|               |                  |                    |                              |             |       |       | 12      | 3        |
|               |                  |                    | <b>Nautilus</b> Breynius.    |             |       |       |         |          |
| Ft. C.        | 489              | Type.              | ? champlainensis.. Whitf.    | A. M. N. H. | I     | 329   | 31      | I        |
| "             | "                | "                  | ".....                       | " "         | I     | 329   | 31      | 3        |
| "             | 490              | "                  | Kelloggi..... Whitfield.     | " "         | I     | 328   | 30      | I        |
| "             | "                | "                  | ".....                       | " "         | I     | 328   | 31      | 4        |
| "             | "                | "                  | ".....                       | " "         | I     | 328   | 31      | 5        |
| "             | 508              | "                  | Perkinsi..... Whitfield.     | " "         | 9     | 182   | 5       | I, 2     |
|               |                  |                    | <b>Oncoceras</b> Hall.       |             |       |       |         |          |
| Tr.           | $\frac{997}{2}$  | "                  | abruptum..... Hall.          | Geol. Wis.  | 186I  | 44    |         |          |
|               |                  |                    | Whitfield.                   | Mem. A. M.  | I     | 68    | 10      | I-3      |
| "             | 1000             | "                  | alceus..... Hall.            | Geol. Wis.  | 186I  | 46    |         |          |
|               |                  |                    | Whitfield.                   | Mem. A. M.  | I     | 70    | 9       | 23-26    |
| "             | $\frac{824}{2}$  | Gen. and Sp. Type. | constrictum..... Hall.       | Pal. N. Y.  | I     | 197   | 41      | 6a-c     |
| "             | $\frac{824}{1}$  | "                  | ".....                       | " "         | I     | 197   | 41      | 6d       |
| "             | "                | "                  | ".....                       | " "         | I     | 197   | 41      | 6e       |
| "             | "                | "                  | ".....                       | " "         | I     | 197   | 41      | 7a-c     |
| "             | "                | "                  | ".....                       | " "         | I     | 197   | 41      | 7d       |
| "             | "                | "                  | ".....                       | N. Y. S. M. | 3     | 172   | 3       | 3a, b    |
| "             | "                | Fig'd.             | ".....                       | Pal. N. Y.  | I     | 197   | 41      | 6f       |
| "             | 999              | Type.              | lycus..... Hall.             | Geol. Wis.  | 186I  | 45    |         |          |
|               |                  |                    | Whitfield.                   | Mem. A. M.  | I     | 69    | 9       | 13, 14   |
| "             | $\frac{998}{2}$  | "                  | pandion..... Hall.           | Geol. Wis.  | 186I  | 45    |         |          |
|               |                  |                    | Whitfield.                   | Mem. A. M.  | I     | 69    | 9       | 20       |
| "             | $\frac{998}{1}$  | "                  | "..... Hall.                 | Geol. Wis.  | I     | 41    | ....    | 3        |
|               |                  |                    | Whitfield.                   | Mem. A. M.  | I     | 69    | 9       | 21, 22   |
| "             | 996              | "                  | plebeium..... Hall.          | Geol. Wis.  | 186I  | 44    |         |          |
|               |                  |                    | Whitfield.                   | Mem. A. M.  | I     | 68    | 9       | 15-19    |
|               |                  |                    | <b>Ormoceras</b> Stokes.     |             |       |       |         |          |
| H. R.         | $\frac{1141}{1}$ | "                  | crebriseptum..... Hall.      | Pal. N. Y.  | I     | 313   | 86      | 2a       |
| "             | "                | "                  | ".....                       | " "         | I     | 313   | 87      | 2a-c, e  |
| "             | $\frac{1141}{2}$ | "                  | ".....                       | " "         | I     | 313   | 87      | 2d       |
| B. R.         | $\frac{605}{1}$  | "                  | tenuifilum..... Hall.        | " "         | I     | 55    | 15      | Ic       |
| "             | "                | "                  | ".....                       | " "         | I     | 55    | 16      | Ib, c, e |
| "             | $\frac{605}{6}$  | "                  | ".....                       | " "         | I     | 55    | 17      | I, Ia    |
| "             | $\frac{605}{1}$  | "                  | ".....                       | " "         | I     | 55    | 17      | Ib       |
| B. R. or Tr.  | $\frac{605}{3}$  | Fig'd.             | " ?.....                     | " "         | I     | 222   | 58      | 2a       |
| "             | "                | "                  | " ?.....                     | " "         | I     | 222   | 58      | 2b, c    |
| B. R.         | $\frac{605}{1}$  | "                  | " ?, var. distans. Hall.     | " "         | I     | 55    | 17      | 2        |



| LOCALITY.            | REMARKS.                                                                   |
|----------------------|----------------------------------------------------------------------------|
| .....                | See <i>Lituities</i> .                                                     |
| Fort Cassin, Vt.     | A large individual, with artificial section.                               |
| “ “                  | Int. cast retaining some of shell. Used also for figs. 5, 6, pl. 28.       |
| “ “                  | Large individual with the shell almost entire.                             |
| “ “                  | Internal cast, retaining much of shell.                                    |
| “ “                  | Imperfect cast with artificial section.                                    |
| Rockford, Ill.       | Two nearly entire internal casts. A fragm. from Beloit is in series.       |
| Fort Cassin, Vt.     | Cast of medium size showing artificial section.                            |
| “ “                  | Large individual retaining much shell.                                     |
| .....                | As <i>Inachus</i> .                                                        |
| Watertown, N. Y.     | A large individual, nearly entire.                                         |
| “ “                  | Imbedded ; shows water-worn section.                                       |
| “ “                  | Very large cast retaining much of shell.                                   |
| Beloit, Wis.         | Large cast. Incor. ref. to Niag. grp. in Geol. Wis., vol. 1, p. 441.       |
| La Salle Co., Ill.   | Very perfect large cast. From Homer, Troy Grove Tp.                        |
| Fort Cassin, Vt.     | Large cast retaining small portion of shell.                               |
| “ “                  | Most of chamber of habitation of a very large individual.                  |
| “ “                  | Internal cast of very large individual. Partly restored in figure.         |
| “ “                  | “ “ young “ retaining some shell.                                          |
| “ “                  | Fragment cut so as to show siphon and septa.                               |
| “ “                  | Two individuals, one retaining some shell.                                 |
| Platteville, Wis.    | Int. cast of 10 cham. and part of the outer one, and a small fragm.        |
| Beloit, Wis.         | Two casts of 7 and 15 chambers, with parts of those of habitation.         |
| Watertown, N. Y.     | Cast.                                                                      |
| Middleville, N. Y.   | “ of 10 chambers and that of habitation, which is nearly entire.           |
| “ “                  | “ “ 8 “ “ “                                                                |
| “ “                  | Rather small fragment, imbedded.                                           |
| “ “                  | Cast of single chamber, imbedded.                                          |
| “ “                  | An almost perfect individual retaining shell.                              |
| “ “                  | An indeterminable fossil, certainly not an <i>Oncoceras</i> .              |
| Beloit, Wis.         | Cast of 10 chambers besides that of habitation.                            |
| Mineral Pt., Wis.    | Cast of 3 chambers besides outer one.                                      |
| .....                | Restored in part in figure.                                                |
| Beloit, Wis.         | Cast of 9 chambers besides outer one.                                      |
| “ “                  | Three internal casts as represented. Four others are in the series.        |
| Near Pulaski, N. Y.  | Cast of 24 chambers besides outer one.                                     |
| “ “                  | Four int. casts ; two retain'g some shell and 1 show. weath. longit. sect. |
| Turin, N. Y.         | Block containing many small individuals, part of which was figured.        |
| Watertown, N. Y.     | Very large indiv., imbedded. Shows weathered longitudinal section.         |
| “ “                  | Three large, imbedded fragments, showing “ “                               |
| Tennessee.           | Small fragment of large individual ; siphon in contact with shell.         |
| Watertown, N. Y.     | Part of large, imbedded indiv.; shows weathered longit. section.           |
| Mohawk Valley?, N.Y. | “ “ siphon with small portion of shell adhering.                           |
| “ “                  | “ “ individual. Shows weathered longitudinal section.                      |
| Watertown, N. Y.     | “ “ imbedded indiv. Shows “ “ “                                            |

## Class CEPHALOPODA—Continued.

| Geol. Subdiv. | Cat. No.          | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.           | REFERENCE.  |      |     |     |            |
|---------------|-------------------|-------------------|--------------------------------------|-------------|------|-----|-----|------------|
|               |                   |                   |                                      | Work.       | Vol. | P.  | Pl. | Figs.      |
|               |                   |                   | <b>Orthoceras</b> Breynius.          |             |      |     |     |            |
| Tr.           | 798               | Type.             | amplicameratum . . . Hall.           | Pal. N. Y.  | I    | 205 | 51  | 1a, c-g    |
| "             | $\frac{805}{3}$   | "                 | anellus . . . . . Conrad.            | P. A. N. S. | I    | 334 |     |            |
|               |                   |                   | Hall.                                | Pal. N. Y.  | I    | 202 | 43  | 6a-c       |
| "             | $\frac{805}{1}$   | Fig'd.            | " (Con.) . . . . . "                 | " "         | I    | 202 | 43  | 6d-f       |
| "             | 807               | Type.             | arcuoliratum . . . . . Hall.         | " "         | I    | 198 | 42  | 7a, side   |
| "             | "                 | "                 | " . . . . . "                        | " "         | I    | 198 | 42  | 7b, c      |
| "             | $\frac{808}{1}$   | "                 | bilineatum . . . . . Hall.           | " "         | I    | 199 | 43  | 2b, d      |
| Ft. C.        | 474               | Fig'd.            | " (H.) Whitfield.                    | A. M. N. H. | 3    | 35  | 2   | 5          |
| Tr.           | $\frac{808}{1}$   | Type.             | " var. $\alpha$ . . . . . Hall.      | Pal. N. Y.  | I    | 200 | 43  | 3a-c       |
| Ft. C.        | 472               | "                 | Brainerdi . . . . . Whitfield.       | A. M. N. H. | I    | 319 | 27  | 14-16      |
| Tr.           | 806               | "                 | clathratum . . . . . Hall.           | Pal. N. Y.  | I    | 201 | 43  | 4a-c       |
| Ch.           | 551               | "                 | clintoni . . . . . Hall.             | Am. P. F.   |      | 244 |     |            |
|               |                   |                   | "                                    | Pal. N. Y.  | I    | 34  | 7   | 3          |
|               |                   |                   | <i>coralliferum</i> . . . . .        |             |      |     |     |            |
| Ft. C.        | 473               | Type.             | cornu-oryx . . . . . Whitfield.      | A. M. N. H. | I    | 320 | 27  | 1, 2, 6    |
| "             | 475               | Fig'd.            | explorator (Bill.).. Whitf.          | " "         | 3    | 33  | 2   | 3          |
|               |                   |                   | <i>gregarium</i> . . . . .           |             |      |     |     |            |
| Tr.           | 797               | Type.             | junceum . . . . . Hall.              | Pal. N. Y.  | I    | 204 | 47  | 3a-f       |
| H. R.         | 1142              | "                 | lamellosum . . . . . Hall.           | " "         | I    | 312 | 86  | 2d, e      |
| Tr.           | 802               | "                 | laqueatum . . . . . Hall.            | " "         | I    | 206 | 56  | 2b, c      |
| "             | "                 | "                 | " ? var. $\alpha$ . . . . . Hall.    | " "         | I    | 206 | 56  | 3          |
| "             | 799               | "                 | latiannulatum . . . . . Hall.        | " "         | I    | 204 | 54  | 1a, b      |
| Ch.           | 552               | "                 | moniliforme . . . . . Hall.          | " "         | I    | 35  | 7   | 5          |
| Bl. River Be. | 581               | Fig'd.            | multicameratum (Con.) H.             | " "         | I    | 45  | 11  | 1-1b       |
| Tr.           | $\frac{981}{2}$   | Type.             | planoconvexum . . . . . Hall.        | Geol. Wis.  | 1861 | 47  |     |            |
|               |                   |                   | Whitfield.                           | Mem. A. M.  | I    | 72  | 8   | 24, 25     |
|               |                   |                   |                                      |             |      |     | 9   | 1, 2       |
| Ca.           | $\frac{387}{1}$   | Fig'd.            | primigenium (Vanux.) H.              | Pal. N. Y.  | I    | 13  | 3   | 11         |
| "             | $\frac{387}{2}$   | "                 | " (Vanux.) Whitf.                    | A. M. N. H. | 2    | 56  | 10  | I          |
| H. R.         | 1396              | Type.             | sociale . . . . . Hall.              | Am. P. F.   |      | 245 |     |            |
|               |                   |                   | "                                    | Geol. Wis.  | 1861 | 46  |     |            |
|               |                   |                   | Whitfield.                           | Mem. A. M.  | I    | 71  | 8   | 16-23      |
| Ft. C.        | 476               | Fig'd.            | sordidum. (Bill.).. Whitf.           | A. M. N. H. | 3    | 34  | 2   | 4          |
| Tr.           | 801               | Type.             | strigatum . . . . . Hall.            | Pal. N. Y.  | I    | 205 | 56  | 1a-d       |
|               |                   |                   | <i>subarcuatum</i> . . . . .         |             |      |     |     |            |
| Tr.           | 804               | Type.             | undulostriatum . . . . . Hall.       | Pal. N. Y.  | I    | 202 | 43  | 7a-k       |
| "             | 803               | "                 | vertebrale . . . . . Hall.           | " "         | I    | 201 | 43  | 5a-c       |
| U.            | $\frac{809}{14}$  | Fig'd.            | sp . . . . . Hall                    | " "         | I    | 311 | 85  | 1a         |
| "             | "                 | "                 | sp . . . . . Hall                    | " "         | I    | 311 | 85  | 1b         |
| "             | $\frac{809}{13a}$ | "                 | sp . . . . . Hall                    | " "         | I    | 311 | 85  | 1d, f      |
| "             | "                 | "                 | sp . . . . . Hall                    | " "         | I    | 311 | 85  | 2          |
| "             | 1065              | "                 | sp <i>coralliform</i> . . . . . Hall | " "         | I    | 312 | 85  | 3          |
| H. R.         | $\frac{1065}{2}$  | "                 | sp <i>coralliform</i> . . . . . Hall | " "         | I    | 312 | 86  | 1d         |
|               |                   |                   | <b>Piloceras</b> Salter.             |             |      |     |     |            |
| Ft. C.        | 484               | Type.             | explanator . . . . . Whitfield.      | A. M. N. H. | I    | 323 | 28  | 1-4        |
| "             | "                 | "                 | " . . . . . "                        | " "         | I    | 325 |     | I          |
|               |                   |                   | <b>Trocholites</b> Conrad.           |             |      |     |     |            |
| Tr.           | 830               | Fig'd.            | ammonius (Con.) . . . Hall.          | Pal. N. Y.  | I    | 192 | 40A | 4a, d, f-k |
| H. R.         | $\frac{1144}{1}$  | "                 | planorbiformis (Con.) Hall.          | " "         | I    | 310 | 84  | 3c-d       |
| "             | $\frac{1144}{2}$  | "                 | " . . . . . "                        | " "         | I    | 310 | 84  | 3e, f      |

## Subkingdom VERMES.

|     |     |       |                                 |            |   |    |    |           |
|-----|-----|-------|---------------------------------|------------|---|----|----|-----------|
| Tr. | 831 | Type. | <b>Conchicolites</b> Nicholson. |            |   |    |    |           |
|     |     |       | flexuosus . . . . . Hall.       | Pal. N. Y. | I | 92 | 29 | 6a, a*, b |



| LOCALITY.             | REMARKS.                                                                                                                             |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Middleville, N. Y.    | Internal casts of parts of three individuals.                                                                                        |
| Mineral Pt., Wis.     | Fragment consisting of 15 chambers retaining shell.                                                                                  |
| " "                   | About 10 chambers of small indiv., imbedded, retaining shell.                                                                        |
| Middleville, N. Y.    | Weathered fragment from near apex of individual.                                                                                     |
| Watertown, N. Y.      | Fragment consisting of about 17 chambers, imbedded.                                                                                  |
| Middleville, N. Y.    | Short fragment retaining shell.                                                                                                      |
| Fort Cassin, Vt.      | Cast of about 21 chambers.                                                                                                           |
| Middleville, N. Y.    | " " 9 " retaining some shell.                                                                                                        |
| Fort Cassin, Vt.      | " " 39 " of a large individual.                                                                                                      |
| Middleville, N. Y.    | About 9 chambers, imbedded ; shows external surface well.                                                                            |
| .....                 | Name proposed.                                                                                                                       |
| Chazy, N. Y.          | As type of <i>O. subarcuatum</i> , preoccupied. About 34 chambers, imbedded. Shows weathered longitudinal section.                   |
| .....                 | See <i>Orthoceras</i> sp.                                                                                                            |
| Fort Cassin, Vt.      | Two considerable fragments ; one of them partly denuded of shell.                                                                    |
| " "                   | Cast of about 17 chambers retaining some shell.                                                                                      |
| .....                 | See <i>O. sociale</i> .                                                                                                              |
| Watertown, N. Y.      | Five fragments retaining more or less shell.                                                                                         |
| Near Pulaski, N. Y.   | Cast of about 18 chambers retaining some shell.                                                                                      |
| Middleville, N. Y.    | Imbedded fragment showing external surface.                                                                                          |
| " "                   | " " " " " "                                                                                                                          |
| " "                   | Two fragmentary internal casts of large individuals.                                                                                 |
| " "                   | Considerable fragment, imbedded ; weathered longitudinal section.                                                                    |
| Watertown, N. Y.      | Three weathered casts. The orig. of larger part of fig. 1a is here.                                                                  |
| Beloit, Wis.          | Two casts. Another frag. cast from Mineral Point is in type series.                                                                  |
| Mohawk Valley, N. Y.  | Imbedded fragment showing weathered vertical section.                                                                                |
| Beekmantown, N. Y.    | Fragment showing weathered vertical section.                                                                                         |
| .....                 | Name proposed.                                                                                                                       |
| .....                 | As type of <i>O. gregarium</i> , preoccupied.                                                                                        |
| Maquoketa Creek, Ia., | A block and six parts of individuals. 12 miles N. W. of Dubuque.                                                                     |
| Fort Cassin, Vt.      | Fragmentary cast of 39 chambers, showing siphon.                                                                                     |
| Middleville, N. Y.    | A nearly entire individ. and 2 fragm. preserving more or less shell.                                                                 |
| .....                 | See <i>O. clintoni</i> .                                                                                                             |
| Middleville, N. Y.    | Four fragments.                                                                                                                      |
| " "                   | Annulated outer chamber.                                                                                                             |
| W. Turin, N. Y.       | As <i>Endoceras proteiforme</i> (?), but has no "embryo tube". Imbed., compressed fragm., showing 29 chambers besides the outer one. |
| " "                   | As <i>E. proteiforme</i> (?). About 35 chambers, imbedded.                                                                           |
| Turin, N. Y.          | " " Three small fragmentary casts.                                                                                                   |
| " "                   | Imbedded, compressed. Probably same species as following.                                                                            |
| " "                   | As type of <i>O. coralliferum</i> . Much compressed cast, 16 chambers.                                                               |
| " "                   | " " " " Compressed cast of about 9 " "                                                                                               |
| Fort Cassin, Vt.      | The specific name of the last two depends upon the presence of an encrusting bryozoan, a purely adventitious circumstance.           |
| " "                   | Three internal casts as described in the explanation of the plate.                                                                   |
|                       | Internal cast showing about 21 chambers besides outer one.                                                                           |
| Middleville, N. Y.    | A nearly entire individual and three internal casts.                                                                                 |
| Grimsby, Ont.         | Individual showing parts of five volutions.                                                                                          |
| Pulaski ?, N. Y.      | Somewhat crushed cast of 9 chambers, and part of body chamber.                                                                       |

## Class ANNELIDA.

|                 |                                                           |
|-----------------|-----------------------------------------------------------|
| Lowville, N. Y. | As <i>Tentaculites</i> ? A single individual and a group. |
|-----------------|-----------------------------------------------------------|

| Subkingdom ARTHROPODA. |             |                      |                                            | Class       |      |    |     |       |
|------------------------|-------------|----------------------|--------------------------------------------|-------------|------|----|-----|-------|
| Geol.<br>Subdiv.       | Cat.<br>No. | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                 | REFERENCE.  |      |    |     |       |
|                        |             |                      |                                            | Work.       | Vol. | P. | Pl. | Figs. |
| Ca.                    | 395         | Type.                | <b>Isochilina</b> Jones.                   |             |      |    |     |       |
| "                      | "           | Fig'd.               | cristata . . . . <i>Whitfield</i> .        | A. M. N. H. | 2    | 59 | 13  | 1, 2  |
| "                      | 394         | Type.                | " ( <i>Whitf.</i> ) . . . . <i>Jones</i> . | Q. J. G. S. | 46   | 23 | I   | 8     |
| "                      | "           | "                    | gregaria . . . . . <i>Whitfield</i> .      | A. M. N. H. | 2    | 58 | 13  | 3     |
| "                      | "           | "                    | " " " " " "                                | " " " "     | 2    | 58 | 13  | 4, 5  |
| "                      | "           | Fig'd.               | " ( <i>Whitf.</i> ) . . . . <i>Jones</i> . | Q. J. G. S. | 46   | 22 | I   | 9, 10 |
| " ?                    | 393         | Type.                | Seelyi . . . . . <i>Whitfield</i> .        | A. M. N. H. | 2    | 60 | 13  | 6, 7  |
| " ?                    | "           | Fig'd.               | " ( <i>Whitf.</i> ) . . . . <i>Jones</i> . | Q. J. G. S. | 46   | 22 | I   | 7     |
|                        |             |                      | <b>Primitia</b> Jones.                     |             |      |    |     |       |
|                        |             |                      | ? <i>cristata</i> . . . . .                |             |      |    |     |       |
|                        |             |                      | <i>gregaria</i> . . . . .                  |             |      |    |     |       |
|                        |             |                      | <i>Seelyi</i> . . . . .                    |             |      |    |     |       |

Order PHYLLOCARIDA.

|        |     |       |                                         |             |   |     |    |         |
|--------|-----|-------|-----------------------------------------|-------------|---|-----|----|---------|
| Ft. C. | 491 | Type. | <b>Ribeiria</b> Sharp.                  |             |   |     |    |         |
| "      | 492 | "     | compressa . . . . <i>Whitfield</i> .    | A. M. N. H. | I | 344 | 33 | 3, 4, 5 |
|        |     |       | ventricosa . . . . . <i>Whitfield</i> . | " "         | I | 344 | 33 | 1, 2    |

Order TRILOBITA.

|        |                  |        |                                               |             |   |     |       |       |
|--------|------------------|--------|-----------------------------------------------|-------------|---|-----|-------|-------|
| Tr.    | $\frac{853}{2}$  | Type.  | <b>Acidaspis</b> Murchison.                   |             |   |     |       |       |
|        |                  |        | <i>spiniger</i> . . . . .                     |             |   |     |       |       |
|        |                  |        | trentonensis . . . . . <i>Hall</i> .          | Pal. N. Y.  | I | 240 | 64    | 4a-g  |
|        |                  |        | <b>Asaphus</b> Brongniart.                    |             |   |     |       |       |
|        |                  |        | <i>Barrandii</i> . . . . .                    |             |   |     |       |       |
| Ch.    | 556              | Fig'd. | canalis ( <i>Con.</i> ) . . . . <i>Hall</i> . | Pal. N. Y.  | I | 25  | 4 bis | 18    |
| Ft. C. | 493              | "      | " " " " " <i>Whitf.</i>                       | A. M. N. H. | I | 336 | 34    | 1, 3  |
| "      | "                | "      | " " " " " "                                   | " "         | I | 336 | 34    | 2     |
| "      | "                | "      | " " " " " "                                   | " "         | I | 336 | 34    | 4     |
| "      | "                | "      | " " " " " "                                   | " "         | I | 336 | 34    | 5     |
| "      | "                | "      | " " " " " "                                   | " "         | I | 336 | 34    | 6     |
| "      | "                | "      | " " " " " "                                   | " "         | I | 336 | 34    | 7, 8  |
| "      | "                | "      | " " " " " "                                   | " "         | 2 | 64  | 11    | I     |
|        |                  |        |                                               |             |   |     | 12    | I     |
| Tr.    | $\frac{848}{2}$  | Type.  | ? <i>extans</i> . . . . .                     |             |   |     |       |       |
|        |                  |        | gigas ( <i>DeKay</i> ) . . . . <i>Hall</i> .  | Pal. N. Y.  | I | 231 | 61    | 4a-c  |
|        |                  |        | " " " " " <i>Green</i> .                      | M. Am. Tr.  |   | 69  | I     | 7     |
| Ch.    | 557              | "      | " " " " " <i>Hall</i> .                       | Pal. N. Y.  | I | 25  | 4 bis | 16    |
| Tr.    | $\frac{848}{1}$  | "      | " " " " " "                                   | " "         | I | 231 | 60    | 7g    |
| "      | "                | "      | " " " " " "                                   | " "         | I | 231 | 60    | 7i    |
| "      | "                | "      | " " " " " "                                   | " "         | I | 231 | 61    | 3b    |
| H. R.  | $\frac{848}{17}$ | "      | " " " " " "                                   | " "         | I | 231 | 61    | 3d, e |
|        |                  |        | " " " " " "                                   | Geol. Wis.  | I | 41  |       | 5     |
| Tr.    | $\frac{848}{1}$  | "      | " " " " " "                                   | Pal. N. Y.  | I | 231 | 61    | 3g    |
| "      | "                | "      | " " " " " "                                   | " "         | I | 231 | 61    | 3k, m |
| "      | "                | "      | " " " " " "                                   | " "         | I | 231 | 62    | 1b    |
| U.     | $\frac{848}{20}$ | "      | " " " " " "                                   | " "         | I | 254 | 66    | 5     |
| "      | 1070             | Type.  | ? <i>latimarginatus</i> . . . . <i>Hall</i> . | " "         | I | 253 | 66    | 4a, b |
|        |                  |        | <i>nodostriatus</i> . . . . .                 |             |   |     |       |       |
| Be.    | 613              | Type.  | vetustus . . . . . <i>Hall</i> .              | Pal. N. Y.  | I | 227 | 60    | I     |
|        |                  |        | <b>Bathyurellus</b> Billings.                 |             |   |     |       |       |
|        |                  |        | <i>glandicephalus</i> . . . . .               |             |   |     |       |       |



| CRUSTACEA.                |  | Order OSTRACODA.                                                            |  |
|---------------------------|--|-----------------------------------------------------------------------------|--|
| LOCALITY.                 |  | REMARKS.                                                                    |  |
| Cove Is., Ball's Bay, Vt. |  | As <i>Primitia</i> ? Two opposite valves imbedded together.                 |  |
| " "                       |  | A right valve imbedded with many others.                                    |  |
| " "                       |  | As <i>Primitia</i> . A detached left valve.                                 |  |
| " "                       |  | " " Right valve and int. cast of right valve imb. together.                 |  |
| " "                       |  | Two right valves imbedded together.                                         |  |
| Providence Island, L.     |  | As <i>Primitia</i> . Right valve imbedded with many others, and with        |  |
| Champlain, N. Y.          |  | type of <i>Murchisonia gracilens</i> , fig. 14 of plate 8.                  |  |
| " "                       |  | Left valve imbedded with many others.                                       |  |
| .....                     |  | See <i>Isochilina</i> .                                                     |  |
| .....                     |  | " "                                                                         |  |
| .....                     |  | " "                                                                         |  |
| Fort Cassin, Vt.          |  | Cast of interior.                                                           |  |
| " "                       |  | " "                                                                         |  |
| .....                     |  | See <i>Bathyrurus</i> .                                                     |  |
| Bay of Quinta, Ont.       |  | Folded individual.                                                          |  |
| .....                     |  | See <i>Ogygia</i> .                                                         |  |
| Chazy, N. Y.              |  | As <i>Isotelus</i> . Part of a large hypostoma, imbedded.                   |  |
| Fort Cassin, Vt.          |  | Imperfect interior imprints, each retaining some crust.                     |  |
| " "                       |  | Small, imperfect glabella, imbedded.                                        |  |
| " "                       |  | Small, imperfect, left movable cheek, imbedded.                             |  |
| " "                       |  | Imperfect cast, large left movable cheek on block with orig. of fig. 8.     |  |
| " "                       |  | " imprint, convex side large hypostoma ; some crust.                        |  |
| " "                       |  | " " under side of two pygidia.                                              |  |
| " "                       |  | " " " " a large individual partly folded and                                |  |
| " "                       |  | and distorted. Retains much of the crust.                                   |  |
| .....                     |  | See <i>Bathyrurus</i> .                                                     |  |
| .....                     |  | As <i>Isotelus</i> .                                                        |  |
| Watertown?, N. Y.         |  | As type of <i>Isotelus cyclops</i> . Original of Green's cast No. 24. Al-   |  |
| Chazy, N. Y.              |  | most entirely denuded of crust.                                             |  |
| Middleville, N. Y.        |  | As <i>Isotelus</i> . A very small pygid. Species queried in expl. of plate. |  |
| " "                       |  | " " Hypostoma, imbedded.                                                    |  |
| " "                       |  | " " Interior imprint of cranium retaining some crust.                       |  |
| " "                       |  | " " " " pygidium.                                                           |  |
| .....                     |  | " "                                                                         |  |
| Kentucky.                 |  | An almost perfect individual retaining test.                                |  |
| Middleville, N. Y.        |  | As <i>Isotelus</i> . Internal cast of pygidium, imbedded.                   |  |
| " "                       |  | " " Hypostoma.                                                              |  |
| " "                       |  | " " Small pygidium, imbedded.                                               |  |
| Near Fort Plain, N. Y.    |  | " " Very large hypostoma, imbedded.                                         |  |
| Watertown?, N. Y.         |  | An imb. pygid. and pt. of another ; loc. more prob. Collingw'd, Can.        |  |
| .....                     |  | See <i>Bathyrurus extans</i> .                                              |  |
| Mohawk Valley?, N. Y.     |  | As <i>Ogygia</i> ? Imprint under side pygidium retaining some test.         |  |
| .....                     |  | See <i>Bathyrurus</i> .                                                     |  |

## Order TRILOBITA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                      | REFERENCE.  |      |     |     |             |
|------------------|------------------|-----------------------|-----------------------------------------------------------------|-------------|------|-----|-----|-------------|
|                  |                  |                       |                                                                 | Work.       | Vol. | P.  | Pl. | Figs.       |
|                  |                  |                       | <b>Bathyurus</b> Billings.                                      |             |      |     |     |             |
| Ca.              | 397              | Fig'd.                | conicus ( <i>Bill.</i> ).... <i>Whitf.</i>                      | A. M. N. H. | 2    | 61  | 13  | 15, 16      |
| "                | "                | "                     | " " " " " "                                                     | " "         | 2    | 61  | 13  | 17-19       |
| "                | "                | "                     | " " " " " "                                                     | " "         | 2    | 61  | 13  | 20, 21      |
| ?                | 498              | "                     | caudatus ( <i>Bill.</i> ) .. <i>Whitf.</i>                      | " "         | 3    | 39  | 2   | 14          |
| Be.              | $\frac{612}{2}$  | Type.                 | extans. .... <i>Hall.</i>                                       | Pal. N. Y.  | 1    | 228 | 60  | 2c?         |
| Tr.              | 842              | Fig'd.                | " " " " " "                                                     | " "         | 1    | 248 | 61  | 1a, b       |
| ?                | 500              | Type.                 | glandicephalus <i>Whitfield.</i>                                | A. M. N. H. | 3    | 38  | 2   | 9-13        |
| Ft. C.           | 499a             | "                     | Perkinsi " " " "                                                | " "         | 9    | 183 | 5   | 7, 8        |
| Ca.              | 396              | "                     | Seelyi. .... <i>Whitfield.</i>                                  | " "         | 2    | 62  | 13  | 8, 9, 11-14 |
| "                | "                | "                     | " " " " " "                                                     | " "         | 2    | 62  | 13  | 10, ext.    |
| Tr.              | 854              | "                     | spiniger. .... <i>Hall.</i>                                     | Pal. N. Y.  | 1    | 241 | 64  | 5, "        |
| ?                | $\frac{842}{2}$  | Fig'd.                | ? sp. .... <i>Hall.</i>                                         | " "         | 1    | 258 | 67  | 3a, b       |
|                  |                  |                       | <b>Bolbocephalus</b> Whitfield.                                 |             |      |     |     |             |
| Ft. C.           | 494              | Gen. and<br>Sp. Type. | Seelyi. .... <i>Whitfield.</i>                                  | A. M. N. H. | 1    | 339 | 33  | 12-18       |
| "                | "                | "                     | " " " " " "                                                     | " "         | 3    | 36  | 3   | 3-8         |
| "                | "                | "                     | " " " " " "                                                     | " "         | 3    | 36  | 3   | 1, 2        |
| "                | 495              | Type.                 | ? truncatus .... <i>Whitfield.</i>                              | " "         | 3    | 37  | 2   | 6-8         |
|                  |                  |                       | <b>Calymene</b> Brongniart.                                     |             |      |     |     |             |
| Tr.              | $\frac{843}{1}$  | Fig'd.                | <i>Becki.</i> ....<br>callicephala ( <i>Grn.</i> ) <i>Hall.</i> | Pal. N. Y.  | 1    | 238 | 64  | 3a-c, n?    |
| H. R.            | $\frac{843}{14}$ | "                     | " " " " " "                                                     | " "         | 1    | 238 | 64  | 3e-g        |
| "                | $\frac{1409}{2}$ | Type.                 | Chrystyi. .... <i>Hall.</i>                                     | N. Y. S. M. | 13   | 119 |     |             |
| "                | "                | "                     | " " " " " "                                                     | " "         | 15   | 174 | 10  | 2-5         |
| "                | 1408             | "                     | mammillata. .... <i>Hall.</i>                                   | Geol. Wis.  | 1861 | 50  |     |             |
| "                | "                | "                     | " " " " " "                                                     | " "         | 1    | 432 |     | 1, 2        |
| U.               | 1069             | Fig'd.                | <i>senaria.</i> ....<br>sp. .... <i>Hall.</i>                   | Pal. N. Y.  | 1    | 253 | 66  | 3a          |
|                  |                  |                       | <b>Ceraurus</b> Green.                                          |             |      |     |     |             |
| Tr.              | $\frac{850}{1}$  | "                     | pleurexanthemus ( <i>Grn.</i> ) <i>H.</i>                       | " "         | 1    | 242 | 65  | 1b-n        |
| "                | "                | "                     | " " " " " "                                                     | " "         | 1    | 242 | 66  | 1a-g        |
| "                | "                | "                     | " " " " " "                                                     | " "         | 1    | 242 | 66  | 1h          |
|                  |                  |                       | <i>postulosus.</i> ....                                         |             |      |     |     |             |
|                  |                  |                       | <i>vigilans.</i> ....                                           |             |      |     |     |             |
|                  |                  |                       | <i>Dalmania</i> Emmrich                                         |             |      |     |     |             |
|                  |                  |                       | <i>breviceps.</i> ....                                          |             |      |     |     |             |
|                  |                  |                       | <b>Dalmanites</b> Barrande.                                     |             |      |     |     |             |
| H. R.            | 1410             | Type.                 | breviceps. .... <i>Hall.</i>                                    | N. Y. S. M. | 24   | 223 | 8   | 15, 16      |
| Tr.              | 849              | "                     | callicephala. .... <i>Hall.</i>                                 | Pal. N. Y.  | 1    | 247 | 65  | 3a-i        |
| "                | "                | Fig'd.                | " " " " " "                                                     | " "         | 1    | 245 | 65  | 2e          |
|                  |                  |                       | <b>Encrinurus</b> Emmrich.                                      |             |      |     |     |             |
| "                | 851              | Type.                 | vigilans. .... <i>Hall.</i>                                     | " "         | 1    | 245 | 65  | 2a-d, f-h   |
|                  |                  |                       | <b>Harpes</b> Goldfuss.                                         |             |      |     |     |             |
| Ft. C.           | 503              | "                     | cassinensis. . . <i>Whitfield.</i>                              | A. M. N. H. | 9    | 182 | 5   | 3, 4        |
| Tr.              | 841              | "                     | pustulosus. .... <i>Hall.</i>                                   | Pal. N. Y.  | 1    | 246 | 61  | 2a, b       |
|                  |                  |                       | <b>Illænus</b> Dalman.                                          |             |      |     |     |             |
| "                | $\frac{845}{1}$  | Fig'd.                | crassicauda ( <i>Wahl.</i> ) <i>Hall.</i>                       | " "         | 1    | 229 | 60  | 4a, b       |
| "                | $\frac{845}{2}$  | "                     | " " " " " "                                                     | " "         | 1    | 229 | 60  | 4c, d       |
| "                | 846              | Type.                 | latidorsatus. .... <i>Hall.</i>                                 | " "         | 1    | 230 | 60  | 6a, b       |
| "                | $\frac{1011}{8}$ | "                     | ovatus .... <i>Conrad.</i>                                      | P. A. N. S. | 1    | 332 |     |             |
| "                | "                | Fig'd.                | " " " " " " <i>Hall.</i>                                        | Pal. N. Y.  | 1    | 259 | 67  | 6a, b       |
| "                | "                | "                     | " ( <i>Conrad</i> ) " " " "                                     | " "         | 1    | 259 | 67  | 6a(lower)   |



| LOCALITY.                       | REMARKS.                                                                                                                                           |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Beekmantown, N. Y.              | Internal cast of cranium retaining some test.                                                                                                      |
| “ “                             | Three imperfect internal casts of crania retaining some test.                                                                                      |
| “ “                             | Pygidium, imbedded.                                                                                                                                |
| Bridport, Vt.                   | Internal cast pygidium. From above the Fort Cassin beds.                                                                                           |
| Lowville, N. Y.                 | As <i>Asaphus</i> ? Int. impr. pygid. and pt. of thorax ret'g some test.<br>Ref. to this figure by Prof. Hall, but does not agree closely with it. |
| Watertown, N. Y.                | As type of <i>Asaphus</i> ? <i>nodostratus</i> . Glabella, imbedded.                                                                               |
| Shoreham, Vt.                   | As <i>Bathyurellus</i> ? Internal imprint of cranium and of pygidium, each with some test. From above Fort Cassin beds.                            |
| Fort Cassin, Vt.                | Two glabellas. Genal angles completed from the larger specimen.                                                                                    |
| Beekmantown, N. Y.              | Imperfect interior imprints, three specimens.                                                                                                      |
| “ “                             | Left movable cheek, imbedded. See also <i>Bolbocephalus</i> .                                                                                      |
| Mohawk Valley, N. Y.            | As <i>Acidaspis</i> . Glabella, imbedded.                                                                                                          |
| Snake Hill, Saratoga Co., N. Y. | As type of <i>Olenus undulostriatus</i> . Exterior imprint, cephalic shield and first six thoracic segments.                                       |
| .....                           | As <i>Bathyrurus</i> ?                                                                                                                             |
| Fort Cassin, Vt.                | Generic type. Casts of two crania, an imperfect right movable cheek and three pygidia. Some crust.                                                 |
| “ “                             | Cast of small cranium retaining small pieces of test.                                                                                              |
| “ “                             | “ pygidium retaining some test.                                                                                                                    |
| .....                           | See <i>Triarthrus</i> .                                                                                                                            |
| Middleville, N. Y.              | As <i>C. senaria</i> Con. An exfoliated individual, a small, nearly perfect one, and an exterior imprint of a glabella.                            |
| Cincinnati, O.                  | As <i>C. senaria</i> Con. Small, folded individual.                                                                                                |
| 4 m. west of Oxford, O.         | Two folded individuals, one of which is very perfect.                                                                                              |
| Maquoketa Cr., 12 m.            | A large, partly exfoliated cranium and a pygidium, imbedded separately. Four unfigured types in the series.                                        |
| N. W. of Dubuque, Ia.           | See <i>C. callicephala</i> .                                                                                                                       |
| .....                           | Internal cast of about nine thoracic segments retaining some test.                                                                                 |
| Canajoharie, N. Y.              |                                                                                                                                                    |
| Middleville, N. Y.              | Ten specimens showing the parts represented.                                                                                                       |
| “ “                             | Head and seven thoracic segments of very large individual.                                                                                         |
| “ “                             | Right movable cheek, imbedded. Figure not lettered on plate.                                                                                       |
| .....                           | See <i>Harpes</i> .                                                                                                                                |
| .....                           | “ <i>Dalmanites callicephala</i> and <i>Encrinurus vigilans</i> .                                                                                  |
| .....                           | = <i>Dalmanites</i> .                                                                                                                              |
| .....                           | See “                                                                                                                                              |
| Lebanon, O.                     | As <i>Dalmaia</i> . Internal cast retaining some test.                                                                                             |
| Middleville, N. Y.              | “ <i>Phacops</i> . The parts as represented. Five specimens.                                                                                       |
| “ “                             | “ <i>Ceraurus vigilans</i> . A pygidium, imbedded.                                                                                                 |
| “ “                             | As <i>Ceraurus</i> . Three individuals, imbedded separately. There are eleven unfigured types in the series.                                       |
| Fort Cassin, Vt.                | Two cephalae, imbedded.                                                                                                                            |
| Watertown, N. Y.                | As <i>Ceraurus</i> ? Int. cast of left mov. cheek and spine, imbedded.                                                                             |
| “ “                             |                                                                                                                                                    |
| Middleville, N. Y.              | Two crania, imbedded separately.                                                                                                                   |
| Watertown, N. Y.                | A small individual considerably exfoliated.                                                                                                        |
| .....                           | Head and part of thorax, imbedded, partly crushed.                                                                                                 |
| .....                           | As <i>Thaleops</i> .                                                                                                                               |
| Mineral Pt., Wis.               | “ “ ( <i>Illænus</i> ). Individual preserving most of test.                                                                                        |
| “ “                             | “ “ Internal imprint with some of test.                                                                                                            |

Order TRILOBITA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.    | REFERENCE.  |      |     |      |       |
|---------------|------------------|-------------------|-------------------------------|-------------|------|-----|------|-------|
|               |                  |                   |                               | Work.       | Vol. | P.  | Pl.  | Figs. |
| Tr.           | $\frac{1012}{1}$ | Type.             | <b>Illænus</b> Dalman—Cont.   |             |      |     |      |       |
|               |                  |                   | taurus.....Hall.              | Geol. Wis.  | 1861 | 49  |      |       |
|               | $\frac{1012}{2}$ | “                 | “.....Whitfield.              | Mem. A. M.  | I    | 73  | 12   | 4-7   |
|               |                  |                   | “.....Hall.                   | Geol. Wis.  | 1861 | 49  |      |       |
|               | $\frac{1012}{3}$ | Fig'd.            | “ (Hall.)..Whitfield.         | Mem. A. M.  | I    | 73  | 12   | 8     |
|               |                  |                   | trentonensis (Emmons) H.      | “ “         | I    | 73  | 12   | 9     |
| “             | $\frac{847}{2}$  | “                 |                               | Pal. N. Y.  | I    | 230 | 60   | 5     |
| Ft. C.        | 567              | Type.             | <i>Isotelus</i> DeKay. ....   |             |      |     |      |       |
|               |                  |                   | canalis.....                  |             |      |     |      |       |
|               | $\frac{852}{1}$  | Fig'd.            | “.....                        |             |      |     |      |       |
|               |                  |                   | “.....                        |             |      |     |      |       |
|               | $\frac{852}{1}$  | “                 | “.....                        |             |      |     |      |       |
|               |                  |                   | “.....                        |             |      |     |      |       |
| Ft. C.        | 509              | Type.             | <b>Lichas</b> Dalman.         |             |      |     |      |       |
|               |                  |                   | champlainensis Whitfield      | A. M. N. H. | I    | 342 | 33   | 6-8   |
|               | $\frac{852}{1}$  | Fig'd.            | trentonensis (Conr.) Hall.    | Pal. N. Y.  | I    | 235 | 64   | 1a, b |
|               |                  |                   | “ “ “                         | “ “         | I    | 235 | 64   | 1c, d |
|               | 509              | Type.             | <b>Nileus</b> Dalman.         |             |      |     |      |       |
|               |                  |                   | striatus.....Whitfield.       | A. M. N. H. | 9    | 184 | 5    | 5, 6  |
| Tr.           | $\frac{1015}{1}$ | “                 | <b>Ogygia</b> Brongniart.     |             |      |     |      |       |
|               |                  |                   | Barrandii.....Hall.           | Lake Sup.   | 2    | 210 | 27   | 1a    |
|               | $\frac{1015}{1}$ | “                 | “.....                        | “ “         | 2    | 210 | 27   | 1b, c |
|               |                  |                   | “.....                        | “ “         | 2    | 210 | 27   | 1d    |
|               | “                | “                 | “.....                        | Geol. Wis.  | I    | 41  | .... | 4     |
|               |                  |                   | “.....                        | Lake Sup.   | 2    | 210 | 28   | 1     |
| H. R.         | 4493             | Type.             | ? <i>vetusta</i> .....        |             |      |     |      |       |
|               |                  |                   |                               |             |      |     |      |       |
|               | 4493             | Type.             | <b>Olenus</b> Dalman.         |             |      |     |      |       |
|               |                  |                   | <i>Thompsoni</i> .....        |             |      |     |      |       |
|               | 4493             | Type.             | <i>undulostriatus</i> .....   |             |      |     |      |       |
|               |                  |                   | <i>vermontanus</i> .....      |             |      |     |      |       |
| Be.           | 568              | Type.             | <b>Phacops</b> Emmrich.       |             |      |     |      |       |
|               |                  |                   | <i>callicephala</i> .....     |             |      |     |      |       |
|               | 568              | Type.             | <i>Platynotus</i> Conrad..... |             |      |     |      |       |
|               |                  |                   | <i>trentonensis</i> .....     |             |      |     |      |       |
|               | 568              | Type.             | <b>Proetus</b> Steininger.    |             |      |     |      |       |
|               |                  |                   | parviusculus.....Hall.        | N. Y. S. M. | 13   | 120 |      |       |
| Tr.           | 839              | Fig'd.            | “ “ “                         | “ “         | 24   | 223 | 8    | 14    |
|               |                  |                   | “ “ “                         | “ “         |      |     |      |       |
|               | $\frac{839}{6}$  | “                 | <b>Sao</b> Barrande.          |             |      |     |      |       |
|               |                  |                   | ? lamottensis.. Whitfield.    | A. M. N. H. | I    | 334 | 33   | 9, 10 |
|               | $\frac{839}{8}$  | “                 | “ “ “                         | “ “         | I    | 334 | 33   | 11    |
|               |                  |                   | “ “ “                         | “ “         |      |     |      |       |
| Tr.?          | 839              | “                 | <i>Thaleops</i> Conrad.....   |             |      |     |      |       |
|               |                  |                   | <i>ovata</i> .....            |             |      |     |      |       |
|               | $\frac{839}{8}$  | “                 | <b>Triarthrus</b> Green.      |             |      |     |      |       |
|               |                  |                   | Becki (Green).....Hall.       | Pal. N. Y.  | I    | 237 | 64   | 2a-e  |
|               | $\frac{839}{8}$  | “                 | “ “ “                         | “ “         | I    | 250 | 66   | 2b    |
|               |                  |                   | “ “ “                         | “ “         | I    | 250 | 66   | 2c, d |
| U.            | 839              | “                 | “ “ “                         | “ “         | I    | 250 | 66   | 2g    |
|               |                  |                   | “ “ “                         | “ “         | I    | 250 | 66   | 2h    |
|               | $\frac{839}{8}$  | “                 | “ “ “                         | “ “         | I    | 250 | 66   | 2i    |
|               |                  |                   | “ “ “                         | “ “         | I    | 250 | 66   | 2i, k |
|               | $\frac{839}{6}$  | “                 | “ “ “                         | “ “         | I    | 250 | 66   | 3b    |
|               |                  |                   | “ “ “                         | “ “         | I    | 250 | 66   |       |
| H. R.         | $\frac{844}{2}$  | Fig'd.            | <b>Trinucleus</b> Llhwydd.    |             |      |     |      |       |
|               |                  |                   | concentricus (Eaton) Hall.    | “ “         | I    | 249 | 65   | 4a    |
|               | $\frac{844}{1}$  | “                 | “ “ “                         | “ “         | I    | 249 | 65   | 4c    |
|               |                  |                   | “ “ “                         | “ “         | I    | 255 | 67   | 1a-c  |
|               | $\frac{844}{5}$  | “                 | “ “ “                         | “ “         | I    | 255 | 67   | 1g    |
|               |                  |                   | “ “ “                         | “ “         | I    | 255 | 67   | 1h    |



| LOCALITY.              | REMARKS.                                                                                                                                                 |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mineral Pt., Wis.      | Entire, folded, retains most of test.                                                                                                                    |
| Rockford, Ill.         | Internal cast cranidium, imbedded. From the Galena horizon.                                                                                              |
| Near Wilmington, Ill.  | " " pygidium retaining part of test.                                                                                                                     |
| Hogansburgh, N. Y.     | The orig. came from a boulder and was lost prior to 1847. It is represented in the Museum by a plaster cast of Emmons's type spec.<br>= <i>Asaphus</i> . |
| .....                  | See " "                                                                                                                                                  |
| .....                  | " " <i>gigas</i> .                                                                                                                                       |
| .....                  | " " "                                                                                                                                                    |
| Isle La Motte, Vt.     | Int. imprint of pygidium retaining some test ; margin imperfect.                                                                                         |
| Carlisle, Penn.        | As <i>Platynotus</i> . Imperf. cranidium and pygidium, imb. separately.                                                                                  |
| Middleville, N. Y.     | " " Part of cephalic shield, imbedded.                                                                                                                   |
| Fort Cassin, Vt.       | Cranidium, imbedded. Figures are enlargements X 3.                                                                                                       |
| St. Joseph's Is., Ont. | As <i>Asaphus</i> . A considerably exfoliated glabella, imbedded.                                                                                        |
| Platteville, Wis.      | " " Exfol. cranid. and a left mov. cheek, imb. separately.                                                                                               |
| .....                  | " " "                                                                                                                                                    |
| Platteville, Wis.      | " " Imperfect pygidium, imbedded.                                                                                                                        |
| " "                    | " " Interior imprint with hypostoma in place.                                                                                                            |
| .....                  | See <i>Asaphus</i> .                                                                                                                                     |
| .....                  | See <i>Olenellus</i> .                                                                                                                                   |
| .....                  | " <i>Bathyurus</i> sp.                                                                                                                                   |
| .....                  | " <i>Olenellus</i> .                                                                                                                                     |
| .....                  | See <i>Dalmanites</i> .                                                                                                                                  |
| .....                  | = <i>Lichas</i> .                                                                                                                                        |
| .....                  | See " "                                                                                                                                                  |
| Cincinnati, O.         | Somewhat distorted individual, restored in figure.                                                                                                       |
| Isle La Motte, Vt.     | Interior imprint of cranidium, retaining some of test.                                                                                                   |
| " "                    | Figure combined from two thoraces imbedded in same block.<br>= <i>Illænus</i> .                                                                          |
| .....                  | See " "                                                                                                                                                  |
| .....                  |                                                                                                                                                          |
| Middleville, N. Y.     | As <i>Calymene</i> . Three specimens, imbedded.                                                                                                          |
| Canajoharie, N. Y.     | " " Cephalic shield and thorax, imb., mostly exfoliated                                                                                                  |
| Turin, N. Y.           | " " Two specimens, imbedded separately.                                                                                                                  |
| Middleville?, N. Y.    | " " Cephalic shield, imbedded.                                                                                                                           |
| Lewis Co., N. Y.       | " " Thorax and pygid. of a small individual imbedded.                                                                                                    |
| Near Johnstown, N. Y.  | " " The hypostoma (?) represented in the figure.                                                                                                         |
| Turin, N. Y.           | " " Four specimens were used in making these figures.                                                                                                    |
| Canajoharie, N. Y.     | " " sp. Pygidium and about six thoracic segments.                                                                                                        |
| Middleville, N. Y.     | Cephalic shield preserving one cheek spine, imbedded.                                                                                                    |
| Glens Falls, N. Y.     | " " " the occipital cheek spine, imbedded.                                                                                                               |
| Lorraine, N. Y.        | A large individ. imbedded, and int. impr. of a rather small individ.                                                                                     |
| Turin, N. Y.           | Head with genal angles wanting, imbedded.                                                                                                                |
| Waterford, N. Y.       | Pygidium and about five thoracic segments, imbedded.                                                                                                     |

## ADDENDUM to pp. 14 and 56.

**Sphenothallus** angustifolius *Hall*, Pal. N. Y., Vol. I, p. 261, pl. 68, fig. 1. Canajoharie, N. Y. Hudson River Group. Cat. No.  $\frac{1145}{1}$ . Gen. and Sp. Type.

This species has been shown by R. Ruedemann, American Geologist, Vol. 17, pp. 163 and 165, 1896, to have the characteristics of a *Conularia*, instead of those of a marine plant, as originally indicated by Prof. Hall. The specimen in question, when examined under a strong glass, shows the fine transverse lines of a *Conularia*. This specimen was deposited in the Museum under certain conditions in June, 1898, by Prof. James Hall.

## CORRIGENDA.

Pages 8 and 9, For **Barrandia** *Hall*. . . . . See *Olenellus*, read *Barrandia* *Hall*. . . . . = *Olenellus*.

Page 16, For de France read Defrance.



BULLETIN  
OF THE  
AMERICAN MUSEUM OF NATURAL  
HISTORY.

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*Volume XI, Part II, 1899.*

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CATALOGUE OF THE TYPES AND FIGURED SPECIMENS  
IN THE PALÆONTOLOGICAL COLLECTION OF THE  
GEOLOGICAL DEPARTMENT, AMERICAN  
MUSEUM OF NATURAL HISTORY.

By R. P. WHITFIELD, assisted by E. O. HOVEY.

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*Oct. 12, 1899*

The Knickerbocker Press, New York



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CATALOGUE OF THE TYPES AND FIGURED SPECI-  
MENS IN THE PALÆONTOLOGICAL COLLECTION  
OF THE GEOLOGICAL DEPARTMENT, AMERICAN  
MUSEUM OF NATURAL HISTORY.

*Part II, Beginning with the Medina Sandstone.*

## ADDENDA ET CORRIGENDA TO PART I.

### ABBREVIATIONS OF THE NAMES OF THE GEOLOGICAL SUBDIVISIONS.

These were not explained in the introduction to Part I because it was thought that they were self-explanatory. Inquiry having been made, however, regarding some of them, the list is inserted here.

|            |                         |
|------------|-------------------------|
| B. R.....  | Black River.            |
| BE.....    | Birdseye.               |
| CA.....    | Calciferos.             |
| CH.....    | Chazy.                  |
| FT. C..... | Fort Cassin (Vt.) beds. |
| H. R.....  | Hudson River.           |
| L. C.....  | Lower Cambrian.         |
| M. C.....  | Middle Cambrian.        |
| TR.....    | Trenton.                |
| U.....     | Utica.                  |
| U. C.....  | Upper Cambrian.         |

Page vi, line 15, instead of "Geographical" read "Geological."

Page 24, under **Cupulocrinus** heterocostalis, instead of figs. "3d-f" read figs. "3a-f," and change second sentence of remark to read "Two stemless bodies, one preserving parts of the arms."

Page 24, under **Dendrocrinus** gracilis, change the remark to read "Body with arms, imbedded."

Page 29, line 18 from bottom, strike out "*extans*."

Page 30, line 9, instead of "**Camerella**" read "**Camarella**."

Page 36, line 24, instead of "sericea" read "sericeus."

Page 39, line 15 in column of Remarks, instead of "fig. 4, pl. 9A," read "fig. 3f, pl. 31A."

Page 40, line 10 from bottom, instead of "*Con*." read "*Emmons*."

Pages 44 and 45, line 6, change to read, "*obtusa*..... See *Cypricardites obtusus*," and transfer entry to **Cypricardites**.

Page 44, line 26, instead of "lata" read "latus."

Page 46, line 9 from bottom, instead of "parallela" read "parallelum."

Page 46, line 12 from bottom, instead of "contracta" read "contractum."



Pages 54 and 55, under **Murchisonia**, insert "*perangulata* . . . . See *Lophospira*" ; and

"*uniangulata* . . . . . See *Lophospira*."

Page 54, line 27 from bottom, instead of "auriformis" read "auriforme."

Page 58, under **Pterotheca**, insert "**P.** undulata *Hall*, 14th Rep't N. Y. State Mus., p. 97. Watertown, N. Y. Trenton Group. Cat. No.  $\frac{795}{1}$ . Type. Nearly entire."

Page 58, line 2 from bottom, instead of figures "4b, d" read figures "4b-d."

Page 60, **Endoceras** proteiforme. The originals of figures 1a and 2d, pl. 50, are from Turin, N. Y.

Page 60, line 22 from bottom, instead of figures "4a, d," read figures "4a-d."

Page 66, line 17 from bottom, instead of "Type" read "Fig'd."

Page 67, line 18, instead of "Quinta" read "Quinte."

## ABBREVIATIONS USED IN PART II, NOT EXPLAINED IN PART I.

### GEOLOGICAL SUBDIVISIONS.

|                 |                   |
|-----------------|-------------------|
| CL.....         | Clinton.          |
| COR.....        | Coralline.        |
| L. H.....       | Lower Helderberg. |
| MED.....        | Medina.           |
| N. or NIAG..... | Niagara.          |
| WL.....         | Waterlime.        |

### AUTHORS' NAMES.

|             |                        |
|-------------|------------------------|
| AG.....     | L. Agassiz.            |
| E. & H..... | Milne-Edwards & Haime. |
| GUETT.....  | Guettard.              |
| HIS.....    | Hisinger.              |
| MCCHES..... | J. H. McChesney.       |
| QUENST ..   | Quenstedt.             |
| WILCK ..... | Wilckens.              |

### WORK CITED.

|              |                                                                          |
|--------------|--------------------------------------------------------------------------|
| T. A. I..... | Transactions of the Albany Institute, 8vo., Albany, vol. iv., 1858-1864. |
|--------------|--------------------------------------------------------------------------|

Upper Silurian. INCERTÆ SEDIS.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                 | REFERENCE.  |        |    |       |       |
|---------------|----------|-------------------|--------------------------------------------|-------------|--------|----|-------|-------|
|               |          |                   |                                            | Work.       | Vol.   | P. | Pl.   | Figs. |
| Med.          | 1423     | Fig'd.            | <b>Dictyolites</b> Conrad.                 |             |        |    |       |       |
|               |          |                   | Becki ( <i>Con.</i> )..... <i>Hall.</i>    | Geol. N. Y. | 4th D. | 48 | 1     | 1     |
|               | 1421     | Type.             | <b>Fucoides</b> Brongniart.                | Pal. N. Y.  | 2      | 6  | 3     | 1     |
|               |          |                   | auriformis ..... <i>Hall.</i>              | Geol. N. Y. | 4th D. | 47 | 1     | 3     |
| Med.          | 1420     | Type.             | <i>Harlani</i> .....                       | Pal. N. Y.  | 2      | 7  | 3     | 4     |
|               |          |                   | heterophyllum .... <i>Hall.</i>            | Pal. N. Y.  | 2      | 7  | 3     | 3     |
|               | 1424     | Fig'd.            | <b>Harlania</b> Gœppert.                   | Geol. N. Y. | 4th D. | 46 | ct. 5 | 2     |
|               |          |                   | alleghaniensis ( <i>Harlan</i> ) <i>H.</i> | Pal. N. Y.  | 2      | 5  | 2     | 1a    |
|               |          |                   | " " " "                                    | " "         | 2      | 5  | 2     | 1b, c |
|               |          |                   | " " " "                                    | " "         | 2      | 6  | 2     | 2     |
|               | 1426     | Type.             | <b>Palæophycus</b> Hall.                   | " "         | 2      | 6  | 3     | 2-2b  |
|               |          |                   | tortuosum ..... <i>Hall.</i>               |             |        |    |       |       |

RILL-MARKS, TRACKS, AND TRAILS.

|      |      |        |                                 |             |        |     |    |           |
|------|------|--------|---------------------------------|-------------|--------|-----|----|-----------|
| Med. | 1427 | Fig'd. | Rill markings..... <i>Hall.</i> | Geol. N. Y. | 4th D. | 53  | 2  | .....     |
| Cl.  | 1602 | "      | Trails of annelids..... "       | Pal. N. Y.  | 2      | 31  | 14 | 2, 3      |
| "    | 1602 | "      | " " " " " "                     | " "         | 2      | 30  | 13 | 1d, 2     |
| "    | "    | "      | " " " " " "                     | " "         | 2      | 31  | 14 | 1         |
| "    | 1604 | "      | Tracks of crustaceans "         | " "         | 2      | 35  | 15 | 1-6       |
| "    | 1    | "      | " " " " " "                     | " "         | 2      | 36  | 16 | 1-4       |
| "    | 1604 | "      | " " " " " "                     | Lake Sup.   | 2      | 215 | 32 | .....     |
| "    | 1601 | "      | Trails of gastropods... "       | Pal. N. Y.  | 2      | 27  | 11 | 1a        |
| "    | 1601 | "      | " " " " " "                     | " "         | 2      | 27  | 11 | 1b, 2b, 3 |
| "    | "    | "      | " " " " " "                     | " "         | 2      | 31  | 14 | 4         |
| "    | 1603 | "      | Trails of lamellibranchs "      | " "         | 2      | 27  | 11 | 4         |
| "    | "    | "      | " " " " " "                     | " "         | 2      | 29  | 12 | 2         |

Kingdom PLANTÆ. Subkingdom

|     |      |       |                                      |            |   |      |    |           |
|-----|------|-------|--------------------------------------|------------|---|------|----|-----------|
| Cl. | 1461 | Type. | <i>Arthrophyucus</i> Hall.           |            |   |      |    |           |
|     |      |       | <i>Harlani</i> .....                 |            |   |      |    |           |
|     |      |       | sp. ....                             |            |   |      |    |           |
|     |      |       | <b>Buthotrephis</b> Hall.            |            |   |      |    |           |
|     |      |       | gracilis ..... <i>Hall.</i>          | Pal. N. Y. | 2 | 18   | 5  | 1a-d      |
|     |      |       | " ?..... "                           | " "        | 2 | 20   | 5a | 1         |
|     |      |       | " <i>var. crassa</i> .. <i>Hall.</i> | " "        | 2 | 19   | 5  | 3b-d      |
|     |      |       | " <i>intermedia</i> .. <i>Hall.</i>  | " "        | 2 | 19   | 5  | 2a, b     |
|     |      |       | <i>palmata</i> ..... <i>Hall.</i>    | " "        | 2 | 20   | 6  | 1         |
|     |      |       | " ..... "                            | " "        | 2 | 20   | 7  | 1b        |
|     |      |       | sp. .... <i>Hall.</i>                | " "        | 2 | .... | 7  | 3         |
|     |      |       | ? sp. .... "                         | " "        | 2 | 21   | 7  | 2a-c      |
|     | 1459 |       | ? sp. .... "                         | " "        | 2 | 21   | 10 | 9a, b, 10 |
|     |      |       | <b>Fucoides</b> Brongniart.          |            |   |      |    |           |
|     |      |       | <i>auriformis</i> .....              |            |   |      |    |           |
|     |      |       | <i>Harlani</i> .....                 |            |   |      |    |           |
|     |      |       | <i>heterophyllum</i> .....           |            |   |      |    |           |



| LOCALITY.                      | REMARKS.                                                                                                                         |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Medina, N. Y.                  | A slab bearing several of these impressions. Figs. are $\frac{2}{3}$ nat. size.                                                  |
| “ “                            | Probably not of organic origin.                                                                                                  |
| .....                          | See <i>Harlania alleghaniensis</i> Harlan.                                                                                       |
| Medina, N. Y.                  | Only a part of the block was figured.                                                                                            |
| .....                          | As <i>Fucoides Harlani</i> (Con.) Hall.                                                                                          |
| Medina, N. Y.                  | As <i>Arthropycus Harlani</i> Con., generic type, but Gœppert’s genus was published first. Only a part of the block was figured. |
| “ “                            | As <i>Arthropycus Harlani</i> Con., generic type. Three slabs, parts of which were figured.                                      |
| “ “                            | As <i>Arthropycus</i> sp.                                                                                                        |
| “ “                            | These fossils are probably the casts of worm burrows or trails.                                                                  |
| “ “                            | Three fragmentary casts of worm burrows (?).                                                                                     |
|                                |                                                                                                                                  |
| Lockport, N. Y.                | Slab of red-gray sandstone about 38 cm. × 28 cm. in size. See also <i>Lingula cuneata</i> Con.                                   |
| New Hartford, N. Y.            | From Blackstone’s quarry. Two blocks.                                                                                            |
| Warren, N. Y.                  | One block is of sandstone, the other of sandy shale.                                                                             |
| “ “                            |                                                                                                                                  |
| “ “                            | Five blocks bearing the tracks figured.                                                                                          |
| “ “                            | Three blocks.                                                                                                                    |
| Green Bay, Wis.                | Large slab of greenish gray, shaly sandst. “Vertebrates?” in text.                                                               |
| New Hartford, N. Y.            |                                                                                                                                  |
| Warren, N. Y.                  | Three blocks.                                                                                                                    |
| “ “                            | Several trails on one block. Figured as “Trails of small gastropods.”                                                            |
| New Hartford, N. Y.            | Figured as the “Trail of a gastropod.”                                                                                           |
| “ “                            | Strong, large impressions in shaly sandstone.                                                                                    |
| CRYPTOGAMIA. Order THALLOGENA. |                                                                                                                                  |
| .....                          | Synonym of <i>Harlania</i> .                                                                                                     |
| .....                          | See <i>Harlania alleghaniensis</i> .                                                                                             |
| .....                          | “ “ “ “                                                                                                                          |
| New Hartford, N. Y.            | Four blocks bearing the imprints or casts. Fig. 1a represents the branches too slender and acute.                                |
| “ “                            | Somewhat weather-worn.                                                                                                           |
| “ “                            | Three specimens.                                                                                                                 |
| “ “                            | Two specimens.                                                                                                                   |
| “ “                            | Cast of a large form. Figure is $\frac{4}{5}$ natural size.                                                                      |
| “ “                            | “ “ form of medium size.                                                                                                         |
| “ “                            | Cast and imprint of a fragment.                                                                                                  |
| “ “                            | Three casts of roots (?).                                                                                                        |
| “ “                            | Two “ “ “ “                                                                                                                      |
| .....                          |                                                                                                                                  |
| .....                          | Entered under <i>Incertæ Sedis</i> .                                                                                             |
| .....                          | “ “ “ “                                                                                                                          |
| .....                          | “ “ “ “                                                                                                                          |

Order THALLOGENA—Continued.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                        | REFERENCE. |      |     |     |           |
|---------------|----------|--------------------|---------------------------------------------------|------------|------|-----|-----|-----------|
|               |          |                    |                                                   | Work.      | Vol. | P.  | Pl. | Figs.     |
| Cl.           | 1458     | Gen. and Sp. Type. | <b>Ichnophycus</b> Hall.<br>tridactylum.....Hall. | Pal. N. Y. | 2    | 26  | 10  | 7a, n. s. |
| "             | "        | "                  | " " " " " "                                       | " "        | 2    | 26  | 10  | 7b, "     |
| "             | 1451     | Type.              | <b>Palæophycus</b> Hall<br>? striatum.....Hall.   | Pal. N. Y. | 2    | 22  | 10  | 1a-d      |
| "             | "        | Fig'd.             | ? " ?....."                                       | " "        | 2    | 22  | 10  | 2         |
| "             | 1452     | Fig'd.             | tortuosum.....<br>sp. ....Hall.                   | Pal. N. Y. | 2    | 22  | 8   | 3         |
| "             | 1457     | Gen. and Sp. Type. | <b>Rusophycus</b> Hall.<br>clavatum.....Hall.     | " "        | 2    | 23  | 8   | 1a, b     |
| "             | 1455     | Type.              | pudicum.....Hall.                                 | " "        | 2    | 24  | 8   | 6a, b     |
| "             | 1456     | "                  | subangulatum....Hall.                             | " "        | 2    | 23  | 8   | 2b        |
| "             | 1452     | Fig'd.             | sp. ....Hall.                                     | " "        | 2    | 22  | 10  | 3         |
| "             | 1450     | "                  | Roots of marine plants Hall.                      | " "        | 2    | 25  | 8   | 4a, b     |
| "             | 1453     | "                  | " " " "                                           | " "        | 2    | 25  | 10  | 4-6, 8    |
| "             | 1605     | "                  | Stem of marine plant "                            | " "        | 2    | 105 | 31  | 7         |

Kingdom ANIMALIA.

Subkingdom

|       |      |        |                                                               |              |      |      |    |        |
|-------|------|--------|---------------------------------------------------------------|--------------|------|------|----|--------|
| Niag. | 1880 | Type.  | <b>Astylospongia</b> Roemer.<br>( <b>Palæomanon</b> )bursa H. | N. Y. S. M.  | 28   | 105  | 3  | 15, 16 |
| "     | 1881 | Fig'd. | præmorsa (Goldf.) Hall.                                       | " "          | 28   | 103  | 3  | 4-8    |
| "     | "    | "      | " " " "                                                       | " "          | 28   | 103  | 3  | 9-11   |
| "     | "    | "      | " " " "                                                       | " "          | 28   | 103  | 3  | 14     |
| "     | "    | Type.  | "var. nuxmoschata, H.                                         | " "          | 28   | 104  | 3  | 12, 13 |
| "     | 1974 | "      | <b>Receptaculites</b> DeFrance.<br>hemisphericus ....Hall.    | Geol. Wis.   | 1861 | 16   |    |        |
|       |      |        | Whitfield.                                                    | Mem. A. M.   | 1    | 46   | 5  | 3, 4   |
| L. H. | 2619 | Fig'd. | infundibuliformis (Eaton) H.                                  | St. G. N. Y. | 2    | .... | 23 | 10     |
|       |      |        | H. & S.                                                       | Pal. N. Y.   | 6    | 290  | 24 | 10     |
| Niag. | 1973 | Type.  | infundibulum.....Hall.                                        | Geol. Wis.   | 1861 | 16   |    |        |
|       |      |        | Whitfield.                                                    | Mem. A. M.   | 1    | 46   | 5  | 1, 2   |
| "     | 1975 | "      | ohioensis.....H. & W.                                         | Pal. Ohio.   | 2    | 123  | 6  | 1      |
| "     | 1879 | "      | subturbatus.....Hall.                                         | T. A. I.     | 4    | 224  |    |        |
|       |      |        | "                                                             | N. Y. S. M.  | 28   | 103  | 3  | 1-3    |

Subkingdom COELENTERATA.

|       |      |                    |                                                     |             |        |     |        |          |
|-------|------|--------------------|-----------------------------------------------------|-------------|--------|-----|--------|----------|
| Niag. | 1672 | Type.              | <b>Dictyonema</b> Hall.<br>gracile.....Hall.        | Pal. N. Y.  | 2      | 175 | 40G    | 1a, c    |
| "     | "    | "                  | " " " "                                             | Geol. N. Y. | 4th D. | 115 | ct. 42 | 2        |
| "     | "    | "                  | " " " "                                             | Pal. N. Y.  | 2      | 175 | 40G    | 1b, d, e |
| "     | 1671 | Gen. and Sp. Type. | retiforme.....Hall.                                 | Geol. N. Y. | 4th D. | 115 | ct. 42 | 1        |
|       |      |                    | "                                                   | Pal. N. Y.  | 2      | 174 | 40F    | 1b, c    |
|       |      |                    | "                                                   | Can. O. R.  | 2      | 12  | ....   | 10       |
|       |      |                    | "                                                   | N. Y. S. M. | 20     | 178 | ....   | 11       |
| "     | "    | "                  | " " " "                                             | Pal. N. Y.  | 2      | 174 | 40F    | 1a, b    |
| Cl.   | 1623 | Type.              | Websteri..(H.) Dawson.                              | C. N. & G.  | 5      | 139 | ....   | 2, 2a    |
| "     | 1465 | "                  | <b>Graptolithus</b> Linn.<br>clintonensis.....Hall. | Geol. N. Y. | 4th D. | 72  | ct. 17 | 12       |
|       | 2    |                    | "                                                   | Pal. N. Y.  | 2      | 39  | A17    | 1c, f    |



| LOCALITY.           | REMARKS.                                                                                                           |
|---------------------|--------------------------------------------------------------------------------------------------------------------|
| New Hartford, N. Y. | Several imprints in shale, of which two were figured.                                                              |
| “ “                 | Cast in block with the original of fig. 6 on same plate.                                                           |
| Clinton, N. Y.      | Four casts of fragments, two of which preserve rootlets.                                                           |
| “ “                 | Cast of what may be an expanded, flattened termination.                                                            |
| .....               | Entered under <i>Incertæ Sedis</i> .                                                                               |
| New Hartford, N. Y. | Cast of a compressed stem.                                                                                         |
| “ “                 | Two casts, imbedded in separate blocks.                                                                            |
| “ “                 | “ “ “ “                                                                                                            |
| “ “                 | Casts of two small fragments on block with other markings.                                                         |
| “ “                 | Cast of a complex marking.                                                                                         |
| Clinton, N. Y.      | Two casts on same block.                                                                                           |
| New Hartford, N. Y. | Four blocks. Orig. of fig. 6 is on the same block with a type of <i>Ichnophycus tridactylum</i> , fig. 7b, pl. 10. |
| Mohawk, N. Y.       | Figured as a “ Fragment of a rib of some vertebrate animal.”                                                       |

PORIFERA.

Class PLETHOSPONGIÆ.

|                        |                                                                              |
|------------------------|------------------------------------------------------------------------------|
| Waldron, Ind.          | A somewhat flattened specimen.                                               |
| “ “                    | Three entire specimens.                                                      |
| “ “                    | Three specimens cut to show sections.                                        |
| “ “                    | Flattened vertically. Figure is not an enlargement.                          |
| “ “                    | Entire. Not separated fr. <i>A. præmorsa</i> in “ doc. edit.” of the report. |
| Racine, Wis.           | Two irregular fragments of casts.                                            |
| Nr. Clarksville, N. Y. | A large colony.                                                              |
| Racine, Wis.           | Two cup-shaped fragments and one not fig'd compose the type series.          |
| Yellow Springs, O.     | A small, hemispherical colony, cast.                                         |
| Waldron, Ind.          | Cast of a small colony.                                                      |

Class HYDROZOA.

|                      |                                                                |
|----------------------|----------------------------------------------------------------|
| Lockport, N. Y.      | As <i>Gorgonia?</i> sp. Part of the frond was figured.         |
| “ “                  | Central part of a frond, imbedded.                             |
| .....                | As <i>Gorgonia ? retiformis</i> .                              |
| .....                | Made generic type of <i>Dictyonema</i> .                       |
| Lockport, N. Y.      | A rather small fragment showing centre of growth.              |
| “ “                  | A large frond. There are two figures lettered 1b.              |
| Nr. New Canaan, N.S. | Five fronds imbedded in slate form the type series.            |
| Rochester, N. Y.     | Rather long fragment. Details completed from another specimen. |

Class HYDROZOA—Continued.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.              | REFERENCE.  |        |       |        |          |
|---------------|----------|--------------------|-----------------------------------------|-------------|--------|-------|--------|----------|
|               |          |                    |                                         | Work.       | Vol.   | P.    | Pl.    | Figs.    |
| Cl.           | 1465     | Type.              | <b>Graptolithus</b> Linn.— <i>Cont.</i> |             |        |       |        |          |
| "             | 2        | "                  | clintonensis.....Hall.                  | Pal. N. Y.  | 2      | 39    | A17    | 1a       |
| "             | 1465     | "                  | " " " " " "                             | " "         | 2      | 39    | A17    | 1b, e    |
| "             | 1        | "                  | " " " " " "                             | " "         | 2      | 39    | A17    | 1d       |
|               | 2        |                    | venosus .....                           | .....       | .....  | ..... | .....  | .....    |
|               |          |                    | <b>Inocaulis</b> Hall.                  |             |        |       |        |          |
| Niag.         | 1670     | Gen. and Sp. Type. | plumulosus.....Hall.                    | Pal. N. Y.  | 2      | 176   | 40G    | 2a, b    |
|               | 1        |                    | " " " " " "                             | Geol. N. Y. | 4th D. | 116   | ct. 43 | 1        |
|               |          |                    | " " " " " "                             | Can. O. R.  | Dec. 2 | 18    | ....   | 26       |
|               |          |                    | " " " " " "                             | N. Y. S. M. | 20     | 185   | ....   | 28       |
|               |          |                    | <b>Retiolites</b> Barrande.             |             |        |       |        |          |
| Cl.           | 1466     | Type.              | venosus.....Hall.                       | Pal. N. Y.  | 2      | 40    | A17    | 2a, b, d |
|               |          |                    | " " " " " "                             | Can. O. R.  | Dec. 2 | ....  | B      | 20, 21   |
|               |          |                    | " " " " " "                             | N. Y. S. M. | 20     | ....  | I      | 20, 21   |
|               |          |                    | <b>Stromatopora</b> Goldfuss.           |             |        |       |        |          |
| Niag.         | 1464     | Fig'd.             | concentrica (Goldf.)..H.                | Pal. N. Y.  | 2      | 136   | 37     | 1a-e     |
| "             | 2        | "                  | " " " " " "                             | " "         | 2      | 136   | 37A    | 1a       |
| "             | "        | "                  | " " " " " "                             | " "         | 2      | 136   | 37     | 1f, g    |
| Cor.          | 1464     | "                  | " " " " " "                             | " "         | 2      | 136   | 73     | 2a, b    |
|               | 4        |                    | Without name.....Hall.                  | Geol. N. Y. | 4th D. | 116   | ct. 43 | 1        |

Class ACTINOZOA.

|       |      |                    |                            |              |        |       |       |           |
|-------|------|--------------------|----------------------------|--------------|--------|-------|-------|-----------|
|       |      |                    | <b>Alveolites</b> Lamarck. |              |        |       |       |           |
|       |      |                    | exsul.....                 | .....        | .....  | ..... | ..... | .....     |
|       |      |                    | <b>Astrocerium</b> Hall.   |              |        |       |       |           |
| Niag. | 1676 | Type.              | constrictum.....Hall.      | Pal. N. Y.   | 2      | 123   | 34A   | 2a, b     |
| "     | "    | "                  | " " " " " "                | " "          | 2      | 123   | 34A   | 3a-e      |
| "     | 1674 | "                  | parasiticum.....Hall.      | " "          | 2      | 122   | 34    | 2a-c      |
| "     | "    | "                  | " " " " " "                | " "          | 2      | 122   | 34    | 2e, sect. |
| "     | "    | "                  | " " " " " "                | " "          | 2      | 122   | 34    | 2f-h      |
| Niag. | 1675 | Type.              | pyriforme.....Hall.        | Pal. N. Y.   | 2      | 123   | 34A   | 1a-e      |
| "     | 1470 | Gen. and Sp. Type. | venustum.....Hall.         | " "          | 2      | 120   | 34    | 1b, base  |
| "     | 2    | "                  | " " " " " "                | Geol. N. Y.  | 4th D. | 91    | ....  | 27, sect. |
| "     | "    | "                  | " " " " " "                | Pal. N. Y.   | 2      | 120   | 34    | 1c-e      |
| "     | "    | "                  | " " " " " "                | " "          | 2      | 120   | 34    | 1j        |
| "     | "    | Fig'd.             | " " " " " "                | " "          | 2      | 122   | 34    | 2d        |
|       |      |                    | <b>Aulopora</b> Goldfuss.  |              |        |       |       |           |
| "     | 1885 | Type.              | precious.....Hall.         | N. Y. S. M.  | 28     | 107   | 9     | 5, 6      |
| L. H. | 2280 | "                  | schohariæ.....Hall.        | " "          | 26     | 110   |       |           |
|       |      |                    | " " " " " "                | St. G. N. Y. | 2      | ....  | 2     | 2         |
|       |      |                    | H. & S.                    | Pal. N. Y.   | 6      | 3     | 2     | 2         |
|       |      |                    | <b>Caninia</b> Michelin.   |              |        |       |       |           |
| Cl.   | 1474 | "                  | bilateralis.....Hall.      | " "          | 2      | 41    | 17    | 3h        |
|       |      |                    | <b>Cannapora</b> Hall.     |              |        |       |       |           |
| Cl.   | 1473 | Gen. and Sp. Type. | junciformis.....Hall       | Pal. N. Y.   | 2      | 43    | 18    | 1a-f      |
|       |      |                    | <b>Catenipora</b> Lamarck. |              |        |       |       |           |
|       |      |                    | agglomerata .....          | .....        | .....  | ..... | ..... | .....     |
|       |      |                    | escharoides .....          | .....        | .....  | ..... | ..... | .....     |



| LOCALITY.                                                                             | REMARKS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rochester, N. Y.<br>Sodus, N. Y.<br>Rochester, N. Y.<br>.....                         | A slab bearing numerous fragments.<br><br>Somewhat distended.<br>See <i>Retiolites venosus</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| .....                                                                                 | Without a name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Lockport, N. Y.<br>.....                                                              | A block bearing more stems than were figured.<br><br>As <i>Graptolithus venosus</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Rochester, N. Y.                                                                      | The slab of shale from which the figs. were made, and its counterpart.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Lockport, N. Y.<br>" "<br>" "<br>Schoharie, N. Y.<br>.....                            | Two small masses.<br>A large, flat mass.<br>A large, hemispheroidal mass, weathered.<br>Two small, irregular masses.<br>See <i>Inocaulis plumulosus</i> Hall.                                                                                                                                                                                                                                                                                                                                                                                                                       |
| .....                                                                                 | See <i>Callopora exsul</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Lockport, N. Y.<br>" "<br>" "<br>" "<br>" "<br>" "<br>" "<br>" "<br>" "<br>" "<br>" " | Part of a hemispherical mass.<br>Two hemispherical masses attached to shells.<br>Three small masses.<br>Small mass showing section ; on an " <i>ichthyodorulite</i> ."<br>Large, flat mass, parts of which were figured. See also <i>A. venustum</i> .<br>Three masses.<br>On a fragment of a <i>Syringopora</i> .<br>As <i>Porites</i> without reference to species.<br>Shows vertical section and moulds of selenite crystals.<br>Surrounding a crinoid column. Two unfig'd spec. are in type series.<br>As a type of <i>A. parasiticum</i> Hall. Young colony on a crinoid stem. |
| Waldron, Ind.                                                                         | Small, very perfect colony on a <i>Whitfieldella nitida</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Clarksville, N. Y.                                                                    | On a weathered crinoid plate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Reynales Basin, N. Y.                                                                 | Small fragment of doubtful relations. Possibly = <i>Amplexus</i> sp.<br>See also <i>Zaphrentis bilateralis</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Ontario, N. Y.<br>.....<br>.....<br>.....                                             | Three fragments which were used in making the figures. Cf.<br><i>Syringopora tabulata</i> E. & H.<br><br>Synonym of <i>Halysites</i> .<br>See <i>Halysites agglomerata</i> .<br>" " <i>catenulatus</i> .                                                                                                                                                                                                                                                                                                                                                                            |

Class ACTINOZOA—Continued.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.       | REFERENCE.   |       |       |       |              |
|---------------|----------|-------------------|----------------------------------|--------------|-------|-------|-------|--------------|
|               |          |                   |                                  | Work.        | Vol.  | P.    | Pl.   | Figs.        |
|               |          |                   | <b>Chætetes</b> Fischer.         |              |       |       |       |              |
|               |          |                   | <i>consimilis</i> .....          | .....        | ..... | ..... | ..... | .....        |
|               |          |                   | <i>corticatus</i> .....          | .....        | ..... | ..... | ..... | .....        |
|               |          |                   | <i>helderbergiae</i> .....       | .....        | ..... | ..... | ..... | .....        |
|               |          |                   | <i>lycoperdon</i> (Say)....Hall  | .....        | ..... | ..... | ..... | .....        |
|               |          |                   | <i>sphericus</i> .....           | .....        | ..... | ..... | ..... | .....        |
|               |          |                   | sp. ....                         | Pal. N. Y.   | 2     | 7     | 4     | I            |
|               |          |                   | <b>Chonophyllum</b> E. & H.      |              |       |       |       |              |
| Niag.         | 1694     | Type.             | <i>niagarensis</i> .....Hall.    | " "          | 2     | 114   | 32    | 4a-h         |
| "             | "        | "                 | " .....                          | " "          | 2     | 114   | 32    | 4i           |
| "             | "        | "                 | " .....                          | " "          | 2     | 114   | 32    | 4k-m         |
| "             | "        | "                 | " .....                          | " "          | 2     | 114   | 32    | 4n           |
|               |          |                   | <b>Cladopora</b> Hall.           |              |       |       |       |              |
| Niag.         | 1684     | "                 | <i>cæspitosa</i> .....           | " "          | 2     | 138   | 38    | 2a-c         |
| "             | 1683     | "                 | <i>cervicornis</i> .....Hall.    | " "          | 2     | 139   | 38    | 3a, b        |
| "             | 1680     | "                 | <i>fibrosa</i> .....             | " "          | 2     | 139   | 38    | 4a, b, 5a, b |
| "             | 1681     | "                 | <i>macrophora</i> .....Hall.     | " "          | 2     | 140   | 39    | 2a, b        |
| "             | 1682     | "                 | <i>multipora</i> .....           | " "          | 2     | 140   | 39    | 1a           |
| "             | "        | "                 | " .....                          | " "          | 2     | 140   | 39    | 1c-g?        |
|               |          |                   | <b>Cœnites</b> Eichwald.         |              |       |       |       |              |
| "             | 1678     | Type.             | <i>laminatus</i> .....           | " "          | 2     | 143   | 39    | 6a-d         |
| "             | 1677     | "                 | <i>ramulosus</i> .....           | " "          | 2     | 142   | 39    | 4a-d         |
|               |          |                   | <b>Conophyllum</b> Hall.         |              |       |       |       |              |
|               |          |                   | <i>niagarensis</i> .....         | .....        | ..... | ..... | ..... | .....        |
|               |          |                   | <b>Cyclolites</b> Lamarck.       |              |       |       |       |              |
|               |          |                   | <i>rotuloides</i> .....          | .....        | ..... | ..... | ..... | .....        |
|               |          |                   | <b>Diphyphyllum</b> Lonsdale.    |              |       |       |       |              |
| Niag.         | 1696     | Type.             | <i>cæspitosum</i> .....          | Pal. N. Y.   | 2     | 116   | 33    | 1a, c-r      |
| "             | "        | Fig'd.            | " ?....."                        | " "          | 2     | 118   | 33    | 2            |
| "             | 1695     | Type.             | ? <i>multicaulis</i> .....Hall.  | " "          | 2     | 119   | 33    | 3a-e         |
| "             | "        | "                 | " .....                          | " "          | 2     | 119   | 33    | 3f, g        |
|               |          |                   | <b>Diplophyllum</b> Hall.        |              |       |       |       |              |
|               |          |                   | <i>cæspitosum</i> .....          | .....        | ..... | ..... | ..... | .....        |
|               |          |                   | <b>Duncanella</b> Nicholson.     |              |       |       |       |              |
| Niag.         | 1886     | Fig'd.            | <i>borealis</i> (Nich.)....Hall. | N. Y. S. M.  | 28    | 106   | 5     | 7, 8         |
|               |          |                   | <b>Favistella</b> Hall.          |              |       |       |       |              |
|               |          |                   | <i>favosidea</i> .....           | .....        | ..... | ..... | ..... | .....        |
|               |          |                   | <b>Favosites</b> Lamarck.        |              |       |       |       |              |
| L. H.         | 2277     | Type.             | <i>conicus</i> .....Hall.        | N. Y. S. M,  | 26    | 112   |       |              |
|               | 2        |                   | " .....                          | St. G. N. Y. | 2     | ....  | 3     | 7, 12, 13    |
|               |          |                   | H. & S.                          | Pal. N. Y.   | 6     | 9     | 3     | 7, 12, 13    |



| LOCALITY.                                          | REMARKS.                                                                                                                                                                                                               |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....<br>.....<br>.....<br>.....<br>.....<br>..... | See <i>Monotrypella consimilis</i> .<br>" <i>Trematopora corticosa</i> .<br>" <i>Ptychonema helderbergiae</i> .<br>" <i>Monticulipora lycoperdon</i> .<br>" <i>Favosites sphericus</i> .<br>" <i>Monticulipora</i> sp. |
| Lockport, N. Y.                                    | As gen. type of <i>Conophyllum</i> H. Three detached and two imb. indiv.                                                                                                                                               |
| " "                                                | " " " Shows partial section.                                                                                                                                                                                           |
| " "                                                | " " " Three fragments, two imbedded.                                                                                                                                                                                   |
| " "                                                | " " " Shows lateral branches, imbedded.                                                                                                                                                                                |
| " "                                                | Imbedded mass with base partly weathered out.                                                                                                                                                                          |
| " "                                                | Imbedded.                                                                                                                                                                                                              |
| " "                                                | Two imb. branches. Description reversed in explanation of plate.                                                                                                                                                       |
| " "                                                | Imbedded.                                                                                                                                                                                                              |
| " "                                                | Surface showing several weathered fragments.                                                                                                                                                                           |
| " "                                                | Block containing what are supposed to be the originals of these enlargements.                                                                                                                                          |
| " "                                                | A weathered specimen somewhat doubtfully referred to this figure.                                                                                                                                                      |
| " "                                                | Irregular, weathered mass, figured in part.                                                                                                                                                                            |
| " "                                                | Block showing branches in section.                                                                                                                                                                                     |
| " "                                                | Branching forms. Part of block was figured.                                                                                                                                                                            |
| " "                                                | Block bearing fragm. supposed to be the orig. of these figures. The enlargements, 1c, d, were made from some specimens in the series, not now distinguishable. An unfigured type is in the series.                     |
| " "                                                | As <i>Limaria laminata</i> . A small, irregular mass.                                                                                                                                                                  |
| " "                                                | " " <i>ramulosa</i> . Two small fragments.                                                                                                                                                                             |
| .....                                              | Synonym of <i>Chonophyllum</i> E. & H.                                                                                                                                                                                 |
| .....                                              | See <i>Chonophyllum niagarensis</i> .                                                                                                                                                                                  |
| .....                                              | See <i>Palæocyclus rotuloides</i> .                                                                                                                                                                                    |
| Lockport, N. Y.                                    | As type of genus <i>Diplophyllum</i> Hall. Ten single cells and aggregates, more or less weathered, which were used for these figures.                                                                                 |
| " "                                                | As <i>Diplophyllum cæspitosum</i> . A short fragment with buds on it.                                                                                                                                                  |
| " "                                                | As <i>Syringopora</i> (?) <i>multicaulis</i> . Three colonies, pts. of each fig'd.                                                                                                                                     |
| " "                                                | " " " The figures were made from polished sections of same group.                                                                                                                                                      |
| .....                                              | Synonym of <i>Diphyphyllum</i> Lonsdale.                                                                                                                                                                               |
| .....                                              | See <i>Diphyphyllum cæspitosum</i> .                                                                                                                                                                                   |
| Waldron, Ind.                                      | As <i>Streptelasma</i> ( <i>Duncanella</i> ) <i>boreale</i> . Two indiv. imb. together.                                                                                                                                |
| .....                                              | See <i>Favosites favosideus</i> .                                                                                                                                                                                      |
| Clarksville, N. Y.                                 | A small and a large colony each preserving some epitheca. Two type specimens figured but not published are in the type series.                                                                                         |

## Class ACTINOZOA—Continued.

| Geol. Subdiv. | Cat. No.          | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                         | REFERENCE.   |        |       |              |                                 |
|---------------|-------------------|-------------------|--------------------------------------------------------------------|--------------|--------|-------|--------------|---------------------------------|
|               |                   |                   |                                                                    | Work.        | Vol.   | P.    | Pl.          | Figs.                           |
| L. H.         | $\frac{2277}{1}$  | Type.             | <b>Favosites</b> Lamarck— <i>Cont.</i><br>conicus.....Hall.        | St. G. N. Y. | 2      | ....  | 3            | 10, <i>sect.</i>                |
| Cl.           | $\frac{1468}{1}$  | "                 | <i>H. &amp; S.</i><br>? favosideus.....Hall.                       | Pal. N. Y.   | 6      | 9     | 3            | 10, "                           |
|               |                   |                   |                                                                    | " "          | 2      | 41    | 17           | 2a-d                            |
| Niag.         | $\frac{1469}{6}$  | Fig'd.            | favosus ( <i>Goldf.</i> ) ?...Hall.                                | " "          | 2      | 126   | 34A<br>(bis) | 5a,c,d, f, g                    |
| "             | "                 | "                 | " " " " " "                                                        | " "          | 2      | 126   | 34A<br>(bis) | 5e                              |
| Niag.         | 1884              | Type.             | Forbesi..... <i>E. &amp; H.</i><br><i>var. occidentalis.</i> Hall. | N. Y. S. M.  | 28     | 109   | 4            | 6-10, 14, 15                    |
| "             | "                 | "                 | " " " " " "                                                        | " "          | 28     | 109   | 4            | 11-13                           |
| L. H.         | $\frac{2276}{1}$  | "                 | helderbergiæ .....Hall.                                            | " "          | 26     | III   |              |                                 |
|               |                   |                   | "                                                                  | St. G. N. Y. | 2      | ....  | { 4<br>5     | 2, <i>base</i><br>3, <i>top</i> |
|               |                   |                   | <i>H. &amp; S.</i>                                                 | Pal. N. Y.   | 6      | 8     | { 4<br>5     | 2, <i>base</i><br>3, <i>top</i> |
| "             | "                 | "                 | " .....Hall.                                                       | N. Y. S. M.  | 26     | III   |              |                                 |
|               |                   |                   | "                                                                  | St. G. N. Y. | 2      | ....  | 5            | 1, 2                            |
|               |                   |                   | <i>H. &amp; S.</i>                                                 | Pal. N. Y.   | 6      | 8     | 5            | 1, 2                            |
| "             | "                 | "                 | " .....Hall.                                                       | N. Y. S. M.  | 26     | III   |              |                                 |
|               |                   |                   | "                                                                  | St. G. N. Y. | 2      | ....  | 6            | 1, 2                            |
|               |                   |                   | <i>H. &amp; S.</i>                                                 | Pal. N. Y.   | 6      | 8     | 6            | 1, 2                            |
| "             | $\frac{2276}{2}$  | "                 | " .....Hall.                                                       | St. G. N. Y. | 2      | ....  | 6            | 8                               |
|               |                   |                   | <i>H. &amp; S.</i>                                                 | Pal. N. Y.   | 6      | 8     | 6            | 8                               |
|               |                   |                   | <i>inexpectans</i> .....                                           | .....        | .....  | ..... | .....        | .....                           |
| Niag.         | $\frac{1673}{4}$  | Type.             | niagarensis .....Hall.                                             | Pal. N. Y.   | 2      | 125   | 34A<br>(bis) | 4a, b                           |
| "             | $\frac{1673}{1}$  | "                 | " " " " " "                                                        | " "          | 2      | 125   | 34A<br>(bis) | 4c-e                            |
| "             | $\frac{1673}{6}$  | "                 | " " " " " "                                                        | " "          | 2      | 125   | 34A<br>(bis) | 4f, g                           |
| Cor.          | $\frac{1673}{4a}$ | Fig'd.            | " ? " " " "                                                        | " "          | 2      | 324   | 73           | 1b                              |
| L. H.         | $\frac{2275}{1}$  | Type.             | sphericus .....Hall.                                               | N. Y. S. M.  | 26     | III   | ....         | .....                           |
|               |                   |                   | "                                                                  | St. G. N. Y. | 2      | ....  | 7            | 1, 8                            |
|               |                   |                   | <i>H. &amp; S.</i>                                                 | Pal. N. Y.   | 6      | 9     | 7            | 1, 8                            |
| "             | "                 | "                 | " .....Hall.                                                       | N. Y. S. M.  | 26     | III   | ....         | .....                           |
|               |                   |                   | "                                                                  | St. G. N. Y. | 2      | ....  | 7            | 6, <i>sect.</i>                 |
|               |                   |                   | <i>H. &amp; S.</i>                                                 | Pal. N. Y.   | 6      | 9     | 7            | 6 "                             |
| Niag.         | 1883              | "                 | spiniger.....Hall.                                                 | N. Y. S. M.  | 28     | 108   | 4            | 1, 2, 5                         |
| "             | "                 | "                 | " " " " " "                                                        | " "          | 28     | 108   | 4            | 3, 4                            |
| "             | "                 | "                 | " " " " " "                                                        | " "          | 28     | 108   | 9            | 1, 2                            |
|               |                   |                   | <b>Gorgonia</b> Linn.<br><i>retiformis</i> .....                   | .....        | .....  | ..... | .....        | .....                           |
|               |                   |                   | sp.....Hall.                                                       | Geol. N. Y.  | 4th D. | 115   | ct. 42       | 2                               |
|               |                   |                   | <b>Halysites</b> Fischer.<br>agglomeratus.....Hall.                | Geol. N. Y.  | 4th D. | ....  | t 22         | 2 ( <i>upp.</i> )               |
|               |                   |                   | "                                                                  | Pal. N. Y.   | 2      | 129   | 35 bis       | 2a, g                           |
| "             | "                 | "                 | " " " " " "                                                        | Geol. N. Y.  | 4th D. | ....  | t 22         | 2 ( <i>low.</i> )               |
|               |                   |                   | "                                                                  | Pal. N. Y.   | 2      | 129   | 35 bis       | 2b-f                            |
| "             | $\frac{1691}{4}$  | Fig'd.            | catenulatus ( <i>Linn.</i> ) Hall.                                 | " "          | 2      | 127   | 35           | 1c, f                           |
| "             | $\frac{1691}{3}$  | "                 | " " " " " "                                                        | " "          | 2      | 127   | 35           | 1d, e                           |
|               |                   |                   | <b>Heliolites</b> Guettard.<br>elegans .....Hall.                  | " "          | 2      | 130   | 36           | 1a-d                            |
| "             | "                 | "                 | " " " " " "                                                        | " "          | 2      | 130   | 36           | 1e-g                            |
| "             | 1986              | "                 | macrostylus.....Hall.                                              | " "          | 2      | 135   | 36A          | 2a-c+                           |



| LOCALITY.             | REMARKS.                                                                                                                                                                 |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cumberland, Md.       | A large weathered colony showing vertical section.                                                                                                                       |
| Reynale's Basin, N.Y. | As <i>Favistella favosidea</i> , but the specimens do not show the characters of that genus. Three masses which show respectively surface, point of origin, and section. |
| Milwaukee, Wis.       | Four fragments.                                                                                                                                                          |
| “ “                   | External imprint.                                                                                                                                                        |
| Waldron, Ind.         | Four pyriform and globular masses, large and small.                                                                                                                      |
| “ “                   | Two sectioned masses. All as <i>F. Forbesi</i> ?, in “doc. edit.” of report.                                                                                             |
| Clarksville, N. Y.    | A large, round, flat colony.                                                                                                                                             |
| “ “                   | A large, elongate and a broad, turbinate mass, weathered.                                                                                                                |
| “ “                   | Two irregular, weathered colonies.                                                                                                                                       |
| Cumberland, Md.       | A very large, entirely silicified colony.                                                                                                                                |
| .....                 | See <i>Ptychonema inexpectans</i> .                                                                                                                                      |
| Niagara Falls, N. Y.  | A small, imbedded fragment from Goat Island.                                                                                                                             |
| Lockport, N. Y.       | A small spheroidal mass and a weathered fragm., each imbedded.<br>Two unfigured specimens are in the type series.                                                        |
| Milwaukee, Wis.       | Two fragments imbedded in limestone.                                                                                                                                     |
| Schoharie, N. Y.      | An ellipsoidal mass showing ends of columns.                                                                                                                             |
| .....                 | As <i>Chætetes sphericus</i> .                                                                                                                                           |
| Clarksville, N. Y.    | Large, hemispherical colony showing longit. and transv. section.                                                                                                         |
| .....                 | As <i>Chætetes sphericus</i> .                                                                                                                                           |
| Clarksville, N. Y.    | Elongated colony showing longitudinal section.                                                                                                                           |
| Waldron, Ind.         | Two irregular masses of medium size.                                                                                                                                     |
| “ “                   | Two masses cut so as to show longitudinal sections.                                                                                                                      |
| “ “                   | A small globular mass.                                                                                                                                                   |
| .....                 | See <i>Dictyonema retiforme</i> .                                                                                                                                        |
| .....                 | “ “ <i>gracile</i> .                                                                                                                                                     |
| .....                 | As <i>Catenipora agglomerata</i> in the “Tables of Organic Remains.”                                                                                                     |
| Sweden, N. Y.         | “ “ “ Surface weathered out of limestone.                                                                                                                                |
| .....                 | “ “ “                                                                                                                                                                    |
| Sweden, N. Y.         | “ “ “ Small, weathered mass; an erratic block.                                                                                                                           |
| Monroe Co., N. Y.     | “ <i>Catenipora escharoides</i> Lamarck. Small mass.                                                                                                                     |
| Louisville, Ky.       | “ “ “ “ “                                                                                                                                                                |
| Lockport, N. Y.       | An irregular, weathered mass.                                                                                                                                            |
| “ “                   | Shows polished sections.                                                                                                                                                 |
| Milwaukee, Wis.       | Imbedded in dolomite.                                                                                                                                                    |

Class ACTINOZOA—Continued.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                  | REFERENCE.                   |        |     |        |                 |                 |
|---------------|----------|--------------------|---------------------------------------------|------------------------------|--------|-----|--------|-----------------|-----------------|
|               |          |                    |                                             | Work.                        | Vol.   | P.  | Pl.    | Figs.           |                 |
| Niag.         | 1687     | Fig'd.             | <b>Heliolites</b> Guettard— <i>Cont.</i>    |                              |        |     |        |                 |                 |
| "             | 1        |                    | pyriformis ( <i>Guett.</i> ) ?.. <i>H.</i>  | Pal. N. Y.                   | 2      | 133 | 36A    | 1a-e            |                 |
| "             | "        |                    | " " " "                                     | " "                          | 2      | 133 | 36A    | 1f, g           |                 |
| "             | "        |                    | " " " "                                     | " "                          | 2      | 133 | 36A    | 1h, i, k        |                 |
| "             | 1687     |                    | " " " "                                     | " "                          | 2      | 133 | 36A    | 1l-m            |                 |
| "             | 2        |                    | Type.                                       | spinipora ..... <i>Hall.</i> | " "    | 2   | 131    | 36              | 2a-e            |
| "             | 1472     |                    |                                             | " " " "                      | " "    | 2   | 131    | 36              | 2f-h            |
| "             | 2        |                    |                                             | " " " "                      | " "    | 2   | 131    | 36              | 2i, <i>enl.</i> |
| "             | "        |                    |                                             | " " " "                      | " "    | 2   | 131    | 36              |                 |
|               |          |                    |                                             | <b>Isis</b> Linn.            |        |     |        |                 |                 |
|               |          |                    | sp ..... <i>Hall.</i>                       | Geol. N. Y.                  | 4th D. | 116 | ct. 43 | 2, 3            |                 |
|               |          |                    | <i>Limaria</i> Steininger.                  |                              |        |     |        |                 |                 |
|               |          |                    | <i>laminata</i> ..... <i>Hall.</i>          |                              |        |     |        |                 |                 |
|               |          |                    | <i>ramulosa</i> ..... <i>Hall.</i>          |                              |        |     |        |                 |                 |
|               |          |                    | <b>Palæocyclus</b> E. & H.                  |                              |        |     |        |                 |                 |
| Cl.           | 1486     | Type.              | rotuloides..... <i>Hall.</i>                | Pal. N. Y.                   | 2      | 42  | 17     | 4a-c            |                 |
| "             | "        | "                  | " " " "                                     | " "                          | 2      | 42  | 17     | 4d              |                 |
| "             | "        | "                  | " " " "                                     | " "                          | 2      | 42  | 17     | 4e, <i>enl.</i> |                 |
|               |          |                    | <i>Polydlasma</i> Hall.                     |                              |        |     |        |                 |                 |
|               |          |                    | <i>turbinatum</i> ..... <i>Hall.</i>        |                              |        |     |        |                 |                 |
|               |          |                    | <b>Porites</b> Lamarck.                     |                              |        |     |        |                 |                 |
|               |          |                    | sp ..... <i>Hall.</i>                       | Geol. N. Y.                  | 4th D. | 91  | ct. 27 |                 |                 |
|               |          |                    | <b>Streptelasma</b> Hall.                   |                              |        |     |        |                 |                 |
| Niag.         | 1692     | Type.              | calyculus ..... <i>Hall.</i>                | Pal. N. Y.                   | 2      | 111 | 32     | 1a-e, g-k       |                 |
| "             | 1887     | "                  | radicans ..... <i>Hall.</i>                 | N. Y. S. M.                  | 28     | 106 | 5      | 1-4             |                 |
| L. H.         | 2283     | "                  | strictum ..... <i>Hall.</i>                 | " "                          | 26     | 114 |        |                 |                 |
|               |          |                    | " " " "                                     | St. G. N. Y.                 | 2      |     | 1      | 7, <i>top</i>   |                 |
|               |          |                    | <i>H. &amp; S.</i>                          | Pal. N. Y.                   | 6      | 1   | 1      | 7, "            |                 |
|               |          |                    | <b>S. (Duncanella).</b>                     |                              |        |     |        |                 |                 |
|               |          |                    | <i>borcaie</i> ..... <i>Hall.</i>           |                              |        |     |        |                 |                 |
|               |          |                    | <b>S. (Petraia).</b>                        |                              |        |     |        |                 |                 |
|               |          |                    | <i>strictum</i> ..... <i>Hall.</i>          |                              |        |     |        |                 |                 |
|               |          |                    | <b>Striatopora</b> Hall.                    |                              |        |     |        |                 |                 |
| Niag.         | 1685     | Gen. and Sp. Type. | flexuosa ..... <i>Hall.</i>                 | Pal. N. Y.                   | 2      | 156 | 40B    | 1a-e            |                 |
| L. H.         | 2281     |                    | issa ..... <i>Hall.</i>                     | N. Y. S. M.                  | 26     | 114 |        |                 |                 |
|               |          |                    | " " " "                                     | St. G. N. Y.                 | 2      |     | 3      | 14, 15          |                 |
|               |          |                    | <i>H. &amp; S.</i>                          | Pal. N. Y.                   | 6      | 6   | 3      | 14, 15          |                 |
|               |          |                    | <b>Syringopora</b> Goldf.                   |                              |        |     |        |                 |                 |
|               |          |                    | <i>multicaulis</i> ..... <i>Hall.</i>       |                              |        |     |        |                 |                 |
|               |          |                    | <b>Vermipora</b> Hall,                      |                              |        |     |        |                 |                 |
| "             | 2282     | Gen. and Sp. Type. | serpuloides..... <i>Hall.</i>               | N. Y. S. M.                  | 26     | 110 |        |                 |                 |
|               |          |                    | " " " "                                     | St. G. N. Y.                 | 2      |     | 2      | 24, 25          |                 |
|               |          |                    | <i>H. &amp; S.</i>                          | Pal. N. Y.                   | 6      | 5   | 2      | 24, 25          |                 |
|               |          |                    | <b>Zaphrentis</b> Rafinesque.               |                              |        |     |        |                 |                 |
| Cl.           | 1474     | Type.              | bilateralis..... <i>Hall.</i>               | Pal. N. Y.                   | 2      | 41  | 17     | 3a, b,d,e       |                 |
| Niag.         | 1888     | "                  | celator..... <i>Hall.</i>                   | N. Y. S. M.                  | 28     | 107 | 5      | 5, 6            |                 |
| L. H.         | 2284     | Fig'd.             | Roëmeri ( <i>E. &amp; H.</i> ) <i>Hall.</i> | St. G. N. Y.                 | 2      |     | 1      | 11-13, 15-21    |                 |
|               |          |                    | <i>H. &amp; S.</i>                          | Pal. N. Y.                   | 6      | 2   | 1      | 11-13, 15-21    |                 |
| Niag.         | 1693     | Type.              | turbinata..... <i>Hall.</i>                 | " "                          | 2      | 112 | 32     | 2a-1            |                 |



| LOCALITY.              | REMARKS.                                                                                                                                    |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Lockport, N. Y.        | Part of an irregularly pyriform, weathered mass.                                                                                            |
| “ “                    | Small, globular mass.                                                                                                                       |
| “ “                    | Preserves walls of tubes.                                                                                                                   |
| Milwaukee, Wis.        | Imbedded in dolomite.                                                                                                                       |
| Lockport, N. Y.        | Ovoid mass broken so as to give sections.                                                                                                   |
| “ “                    | Polished block of crinoidal limestone showing sections of the coral.                                                                        |
| “ “                    | Small mass supposed to be the original of the figure.                                                                                       |
| .....                  | See <i>Thamniscus diffusus</i> .                                                                                                            |
| .....                  | Preoccupied. See <i>Cænites</i> .                                                                                                           |
| .....                  | See <i>Cænites laminatus</i> .                                                                                                              |
| .....                  | “ “ <i>ramulosus</i> .                                                                                                                      |
| Nr. Clinton, N. Y.     | As <i>Cyclolites rotuloides</i> . Two weathered individuals imbedded in same block. Surf. features perfected from the original of fig. 4e.  |
| “ “ “                  | As <i>Cyclolites rotuloides</i> . Imbedded; shows concave side.                                                                             |
| “ “ “                  | “ “ Used also for perfecting surface features of figs. 4a, b.                                                                               |
| .....                  | Synonym of <i>Zaphrentis</i> .                                                                                                              |
| .....                  | See <i>Zaphrentis turbinata</i> .                                                                                                           |
| .....                  | See <i>Astrocerium venustum</i> .                                                                                                           |
| Lockport, N. Y.        | Four individuals ranging from small to very large.                                                                                          |
| Waldron, Ind.          | Two small, imperfect individuals and one cut longitudinally. As <i>S. (Aulacophyllum?) radicans</i> in the “doc. edit.” of the report.      |
| .....                  | As <i>Streptelasma (Petraia) strictum</i> .                                                                                                 |
| Clarksville, N. Y.     | Individual showing the lamellæ very well.                                                                                                   |
| .....                  | See <i>Duncanella borealis</i> .                                                                                                            |
| .....                  | See <i>Streptelasma strictum</i> .                                                                                                          |
| Lockport, N. Y.        | Three fragments, two of which bifurcate.                                                                                                    |
| Clarksville, N. Y.     | Two weathered specimens.                                                                                                                    |
| .....                  | See <i>Diphyphyllum multicaule</i> .                                                                                                        |
| Clarksville, N. Y.     | A small, weathered branch, imbedded.                                                                                                        |
| Reynale’s Basin, N. Y. | As <i>Caninia bilateralis</i> . Three weathered individuals and one cut to show longitudinal section. See also <i>Caninia bilateralis</i> . |
| Waldron, Ind.          | A large individual, nearly entire.                                                                                                          |
| Clarksville, N. Y.     | Nine more or less perfect calyces of various sizes.                                                                                         |
| Lockport, N. Y.        | As type of genus <i>Polydilasma</i> H. Eight individuals and fragments.                                                                     |

MONTICULIPOROIDEA.

| Geol. Subdiv. | Cat. No.  | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.        | REFERENCE.   |      |      |        |                 |
|---------------|-----------|-------------------|-----------------------------------|--------------|------|------|--------|-----------------|
|               |           |                   |                                   | Work.        | Vol. | P.   | Pl.    | Figs.           |
| Niag. L. H.   | 1882 2315 | Type. “           | <b>Monotrypella</b> Ulrich.       |              |      |      |        |                 |
|               |           |                   | consimilis .....Hall.             | N. Y. S. M.  | 28   | 110  | 9      | 7-14            |
|               |           |                   | densa .....Hall.                  | “ “          | 26   | 105  | .....  | .....           |
|               |           |                   | “ “                               | “ “          | 32   | 150  | .....  | .....           |
|               |           |                   | “ “                               | St. G. N. Y. | 2    | .... | 10     | 12, <i>enl.</i> |
| Cl. “ “ “ “   | 637 19    | Fig'd. “ “ “ “    | H. & S. Pal. N. Y.                | 6            | 14   | 10   | 12, “  |                 |
|               |           |                   | ? lycoperdon ( <i>Say</i> ).Hall. | “ “          | 2    | 40   | 17     | 1a-c            |
|               |           |                   | “ “ “ “                           | “ “          | 2    | 40   | 17     | 1d-f            |
|               |           |                   | “ “ “ “                           | “ “          | 2    | 40   | 17     | 1g              |
|               |           |                   | “ “ “ “                           | “ “          | 2    | 40   | 17     | 1h-l            |
| Med.          | 1428      | “                 | sp .....Hall.                     | “ “          | 2    | 7    | 4      | 1, <i>sect.</i> |
| L. H.         | 2316      | Type.             | <b>Ptychonema</b> Hall.           |              |      |      |        |                 |
|               |           |                   | helderbergiae .....Hall.          | N. Y. S. M.  | 26   | 110  | .....  | .....           |
|               |           |                   | “ “                               | “ “          | 32   | 146  | .....  | .....           |
|               |           |                   | “ “                               | St. G. N. Y. | 2    | .... | 9      | 16, 17          |
|               |           |                   | H. & S. Pal. N. Y.                | 6            | 15   | 9    | 16, 17 |                 |

Subkingdom ECHINODERMATA.

|       |                   |                            |                                      |             |       |       |       |                 |
|-------|-------------------|----------------------------|--------------------------------------|-------------|-------|-------|-------|-----------------|
| L. H. | 2289 2291 “ “     | Type. Gen. and Sp. Type. “ | <b>Actinocrinus</b> Miller.          |             |       |       |       |                 |
|       |                   |                            | <i>Christyi</i> .....                | .....       | ..... | ..... | ..... | .....           |
|       |                   |                            | <i>semiradiatus</i> .....            | .....       | ..... | ..... | ..... | .....           |
|       |                   |                            | <b>Aspidocrinus</b> Hall.            |             |       |       |       |                 |
|       |                   |                            | callosus .....Hall.                  | Pal. N. Y.  | 3     | 123   | 5     | 13, 14          |
| L. H. | 2296 2296 1       | Gen. and Sp. Type. “       | scutelliformis .....Hall.            | “ “         | 3     | 122   | 5     | 15-17           |
|       |                   |                            | “ “                                  | “ “         | 3     | 122   | 5     | 18, <i>int.</i> |
|       |                   |                            | ..... “                              |             |       |       |       |                 |
|       |                   |                            | <b>Balanocrinus</b> Troost (Non Ag.) |             |       |       |       |                 |
|       |                   |                            | <i>inflatus</i> .....                | .....       | ..... | ..... | ..... | .....           |
| L. H. | 2296 2296 1       | Gen. and Sp. Type. “       | <b>Brachiocrinus</b> Hall.           |             |       |       |       |                 |
|       |                   |                            | nodosarius .....Hall.                | Pal. N. Y.  | 3     | 118   | 5     | 6, 7            |
|       |                   |                            | “ “                                  | “ “         | 3     | 118   | 6     | 2-3a            |
| Niag. | 1893              | Type.                      | <b>Calceocrinus</b> Hall.            |             |       |       |       |                 |
|       |                   |                            | stigmatus .....Hall.                 | T. A. I.    | 4     | 225   | ..... | .....           |
|       |                   |                            | “ “                                  | N. Y. S. M. | 28    | 147   | 19    | 9-11            |
| L. H. | 2292 2293 “ “ “ “ | Type. “ “ “ “              | <i>Cheirocrinus</i> Hall.            |             |       |       |       |                 |
|       |                   |                            | <i>stigmatus</i> .....               | .....       | ..... | ..... | ..... | .....           |
|       |                   |                            | <b>Cordylocrinus</b> Angelin.        |             |       |       |       |                 |
|       |                   |                            | parvus.....Hall.                     | Pal. N. Y.  | 3     | 114   | 4     | 6-9             |
|       |                   |                            | plumosus .....Hall.                  | “ “         | 3     | 113   | 4     | 3, 5            |
| L. H. | 2299 2299 1       | “ “ “                      | <b>Corymbocrinus</b> Angelin.        |             |       |       |       |                 |
|       |                   |                            | macropetalus.....Hall.               | “ “         | 3     | 111   | 3A    | 1               |
|       |                   |                            | “ “                                  | “ “         | 3     | 111   | 3A    | 8, 9, 12        |
| Niag. | 2038              | Gen. Type.                 | “ “                                  | “ “         | 3     | 111   | 3B    | 1               |
|       |                   |                            | ..... “                              |             |       |       |       |                 |
|       |                   |                            | <b>Cryptodiscus</b> Hall.            |             |       |       |       |                 |
|       |                   |                            | sp .....Hall.                        | N. Y. S. M. | 20    | ....  | 11    | 18              |



| LOCALITY.             | REMARKS.                                                                                                                                                 |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waldron, Ind.         | As <i>Chaetetes consimilis</i> . Four imbedded, branching fragments.                                                                                     |
| .....                 | “ <i>Trematopora densa</i> .                                                                                                                             |
| .....                 | “ “ ( <i>Chaetetes</i> ) <i>densa</i> .                                                                                                                  |
| .....                 | “ “ “ “                                                                                                                                                  |
| Clarksville, N. Y.    | “ <i>Chaetetes</i> ( <i>Monotrypella</i> ) <i>densus</i> . The specimen seems to have been removed from the block for figuring and not returned with it. |
| Reynale’s Basin, N.Y. | As <i>Chaetetes lycoperdon</i> . A small, very flat, ellipsoidal form.                                                                                   |
| “ “ “                 | “ “ “ Globular mass showing longit. section.                                                                                                             |
| “ “ “                 | “ “ “ Large fragm.of branching form, imbedded.                                                                                                           |
| “ “ “                 | “ “ “ Imbedded fragments showing sections.                                                                                                               |
| Lockport, N. Y.       | “ ‘ sp Shows weat hered longit. sect.; imbedded.                                                                                                         |
| .....                 | As <i>Chaetetes helderbergia</i> .                                                                                                                       |
| .....                 | As a type of <i>Favosites inexpectans</i> Hall.                                                                                                          |
| .....                 | As <i>Chaetetes helderbergia</i> .                                                                                                                       |
| Clarksville, N. Y.    | A long, weathered, broken colony imbedded with <i>Fenestella compacta</i> , figs. 4, 5, pl. 22 and <i>F. præcursor</i> , fig. 14. pl. 21, of same vol.   |

Class CRINOIDEA.

|                       |                                                                                                                                                                             |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                 | See <i>Saccocrinus Christyi</i> .                                                                                                                                           |
| .....                 | “ “ <i>semiradiatus</i> .                                                                                                                                                   |
| Nr. Schoharie, N. Y.  | A detached basal plate.                                                                                                                                                     |
| “ “ “                 | “ “ “ “                                                                                                                                                                     |
| “ “ “                 | A very large basal plate, imbedded.                                                                                                                                         |
| .....                 | Synonym of <i>Lampterocrinus</i> .                                                                                                                                          |
| .....                 | See <i>Lampterocrinus inflatus</i> .                                                                                                                                        |
| Nr. Schoharie, N. Y.  | Two fragments of arms, imbedded.                                                                                                                                            |
| Albany Co., N. Y.     | Detached base of an arm.                                                                                                                                                    |
| .....                 | As <i>Cheirocrinus stigmatus</i> .                                                                                                                                          |
| Waldron, Ind.         | The enlargement is to three, not two, diameters.                                                                                                                            |
| .....                 | Preoccupied, and is a synonym of <i>Calceocrinus</i> .                                                                                                                      |
| .....                 | See <i>Calceocrinus stigmatus</i> .                                                                                                                                         |
| Litchfield, N. Y.     | As <i>Platycr. parvus</i> . 3 weathered indiv. retaining pts. of columns.                                                                                                   |
| “ “                   | As <i>Platycrinus plumosus</i> . A much crusted individual, imbedded.                                                                                                       |
| Helderberg Mts., N.Y. | As <i>Mariacrinus macropetalus</i> , but referred here by Wachs. & Spring. Base and portion of body imbedded.                                                               |
| Schoharie Co., N. Y.  | As <i>Mariacrinus macropetalus</i> , but referred here by Wachs. & Spring. Three weathered fragments of columns, imbedded. Four unfigured fragments are in the type series. |
| Schoharie, N. Y.      | As <i>Mariacrinus macropetalus</i> , but referred here by Wachs. & Spring. Fragment of column with rootlets, imbedded.                                                      |
| Racine, Wis.          | Exterior imprint of part of a calyx of a crinoidean (?).                                                                                                                    |

Subkingdom ECHINODERMATA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.         | REFERENCE.  |                |       |        |          |
|------------------|------------------|-----------------------|------------------------------------|-------------|----------------|-------|--------|----------|
|                  |                  |                       |                                    | Work.       | Vol.           | P.    | Pl.    | Figs.    |
|                  |                  |                       | <b>Cyathocrinites</b> Miller.      |             |                |       |        |          |
|                  |                  |                       | <i>pyriformis</i> .....            | .....       | .....          | ..... | .....  | .....    |
|                  |                  |                       | <b>Cyathocrinus</b> Miller.        |             |                |       |        |          |
| Niag.            | 2032             | Type.                 | cora.....Hall.                     | N. Y. S. M. | 20             | 324   | 11     | 13, 14   |
| "                | 1898             | "                     | nucleus .....Hall.                 | " "         | 28,<br>1st ed. | ....  | 15     | 7-9      |
|                  |                  |                       | "                                  | " "         | 28,<br>2d ed.  | 136   | 15     | 7-9      |
| "                | 1897             | "                     | polyxo.....Hall.                   | T. A. I.    | 4              | 199   |        |          |
|                  |                  |                       | "                                  | N. Y. S. M. | 28             | 135   | 15     | 10-17    |
|                  |                  |                       | <i>pusillus</i> .....              | .....       | .....          | ..... | .....  | .....    |
|                  |                  |                       | <i>pyriformis</i> .....            | .....       | .....          | ..... | .....  | .....    |
| Niag.            | <u>2031</u><br>1 | Type.                 | waukoma .....Hall.                 | N. Y. S. M. | 20             | 324   | 11     | 11, 12   |
|                  |                  |                       | <b>Dendrocrinus</b> Hall.          |             |                |       |        |          |
| Niag.            | 1713             | Gen. and<br>Sp. Type. | longidactylus .....Hall.           | Pal. N. Y.  | 2              | 193   | 43     | 1a, b    |
| "                | "                | "                     | " ..... "                          | " "         | 2              | 193   | 43     | 1c       |
| "                | "                | "                     | " ..... "                          | " "         | 2              | 193   | 43     | 1d       |
| "                | "                | "                     | " ..... "                          | " "         | 2              | 193   | 43     | 1i, k    |
|                  |                  |                       | <i>nucleus</i> .....               | .....       | .....          | ..... | .....  | .....    |
|                  |                  |                       | <b>Edriocrinus</b> Hall.           |             |                |       |        |          |
| L. H.            | 2300             | Gen. and<br>Sp. Type. | pocilliformis .....Hall.           | Pal. N. Y.  | 3              | 121   | 5      | 8-12     |
|                  |                  |                       | <b>Eucalyptocrinus</b> Goldfuss.   |             |                |       |        |          |
| Niag.            | <u>1720</u><br>1 | Type.                 | cælatus .....Hall.                 | Pal. N. Y.  | 2              | 210   | 47     | 4a-e     |
| "                | <u>1720</u><br>2 | "                     | " ..... "                          | N. Y. S. M. | 28             | 142   | 16     | 1, 2     |
| "                | "                | "                     | " ..... "                          | " "         | 28             | 142   | 16     | 3, 4     |
| "                | "                | "                     | " ..... "                          | " "         | 28             | 142   | 16     | 5-7      |
| "                | "                | "                     | " ..... "                          | " "         | 28             | 142   | 16     | 8        |
| "                | "                | "                     | " ..... "                          | " "         | 28             | 142   | 16     | 9, 10    |
| "                | "                | "                     | " ..... "                          | " "         | 28             | 142   | 19     | 1        |
| "                | "                | "                     | " ..... "                          | " "         | 28             | 142   | 19     | 3        |
| "                | <u>2039</u><br>1 | "                     | cornutus.....Hall.                 | " "         | 20             | 322   | 11     | 8-10     |
| "                | "                | "                     | " var. excavatus.Hall.             | " "         | 20             | 322   | 11     | 6, 7     |
| "                | <u>1890</u><br>1 | "                     | crassus.....Hall.                  | T. A. I.    | 4              | 197   | ....   | .....    |
|                  |                  |                       | "                                  | N. Y. S. M. | 28             | 141   | 17     | 1-4, 7   |
|                  |                  |                       | "                                  | " "         | 28             | 141   | 18     | 9, enl.  |
| "                | "                | "                     | " ..... "                          | " "         | 28             | 141   | 17     | 5        |
| "                | "                | "                     | " ..... "                          | " "         | 28             | 141   | 17     | 6        |
| "                | "                | "                     | " ..... "                          | " "         | 28             | 141   | 17     | 8        |
| "                | "                | "                     | " ..... "                          | " "         | 28             | 141   | 17     | 9        |
| "                | "                | "                     | " ..... "                          | " "         | 28             | 141   | 17     | 10       |
| "                | "                | "                     | " ..... "                          | " "         | 28             | 141   | 17     | 11, enl. |
| "                | "                | "                     | " ..... "                          | " "         | 28             | 141   | 18     | 1-3      |
| "                | "                | "                     | " ..... "                          | " "         | 28             | 141   | 18     | 4-7      |
| "                | "                | "                     | " ..... "                          | " "         | 28             | 141   | 18     | 8, enl.  |
| "                | "                | "                     | " ..... "                          | " "         | 28             | 141   | 19     | 2        |
| "                | "                | "                     | " ..... "                          | " "         | 28             | 141   | 19     | 4, 5     |
| "                | <u>1890</u><br>2 | "                     | " ..... "                          | " "         | 20             | 323   | 11     | 2, 3     |
| "                | <u>1719</u>      | Fig'd.                | decorus ( <i>Phillips</i> )..Hall. | Geol. N. Y. | 4thD.          | 114   | ct. 41 | 2        |
| "                | "                | "                     | " ..... "                          | Pal. N. Y.  | 2              | 207   | 47     | 3a-c     |
| "                | "                | "                     | " ..... "                          | " "         | 2              | 207   | 47     | 1, 2a    |
| "                | "                | "                     | " ..... "                          | " "         | 2              | 207   | 47     | 3d       |
| "                | <u>2043</u>      | Type.                 | obconicus .....Hall.               | N. Y. S. M. | 20             | 323   | 11     | 1        |
| "                | <u>2042</u><br>1 | "                     | ornatus .....Hall.                 | Geol. Wis.  | 1861           | 20    |        |          |
|                  |                  |                       | "                                  | N. Y. S. M. | 20             | 329   | 11     | 4        |



Class CRINOIDEA—Continued.

| LOCALITY.              | REMARKS.                                                                                              |
|------------------------|-------------------------------------------------------------------------------------------------------|
| .....                  | See <i>Ichthyocrinus laevis</i> .                                                                     |
| Racine, Wis.           | Two internal casts of the calyx.                                                                      |
| .....                  | As <i>Dendrocrinus nucleus</i> .                                                                      |
| Waldron, Ind.          | An armless calyx. Referred to <i>Homocrinus</i> by W. & S.                                            |
| “ “                    | Four calyces. Referred to <i>Homocrinus</i> by W. & S.                                                |
| .....                  | See <i>Lecanocrinus pusillus</i> .                                                                    |
| .....                  | “ <i>Ichthyocrinus laevis</i> .                                                                       |
| Waukesha, Wis.         | Internal cast of small calyx. The exterior imprint is also present.                                   |
| Lockport, N. Y.        | Individual w. arms ; more complete than is represented in figure.                                     |
| “ “                    | Single body plate imbedded. The orig. of fig. 1e was on this block, but has scaled off and been lost. |
| “ “                    | A large body plate, imbedded.                                                                         |
| “ “                    | A stem with branches, imbedded. It is not an arm.                                                     |
| .....                  | See <i>Cyathocrinus nucleus</i> .                                                                     |
| Nr. Clarksville, N. Y. | Two detached bodies.                                                                                  |
| Lockport, N. Y.        | Individual of medium size, nearly entire.                                                             |
| Waldron, Ind.          | A very young and an adult individual retaining arms in place.                                         |
| “ “                    | A large calyx without arms or interbrachial plates.                                                   |
| “ “                    | An adult preserving calyx and interbrachial plates and showing internal structure.                    |
| “ “                    | A large calyx without arms or interbrachial plates.                                                   |
| “ “                    | Basal and first radial plates of a large individual.                                                  |
| “ “                    | Part of a large calyx showing interior of dome.                                                       |
| “ “                    | The base of the visceral chamber formed by four anchylosed plates.                                    |
| Racine, Wis.           | Fragmentary imprints of the exterior.                                                                 |
| “ “                    | Internal cast. An external cast, also, is in the type series.                                         |
| .....                  | This reference applies as well to all the Waldron spec. of this species.                              |
| .....                  | Fig. 2 of this plate is an enlargement to two, not three, diameters.                                  |
| Waldron, Ind.          | Five calyces preserving more or less of the arms.                                                     |
| “ “                    | An entire, young indiv. w. calyx, arms, column and roots, imbedded.                                   |
| “ “                    | A calyx without arms or interbrachial plates.                                                         |
| “ “                    | A calyx with interbrachial plates, but no arms.                                                       |
| “ “                    | A long fragment of a large column, part of which was figured.                                         |
| “ “                    | A calyx with interbrachial plates showing imprint rec'd fr. the arms.                                 |
| “ “                    | Fragment showing parts of four arms.                                                                  |
| “ “                    | Two calyces without arms or interbrachial plates.                                                     |
| “ “                    | Three calyces with interbrachial plates, but no arms.                                                 |
| “ “                    | The interbrachial plates of a small individual.                                                       |
| “ “                    | A calyx without arms or interbrachial plates.                                                         |
| “ “                    | A detached dome plate.                                                                                |
| Racine, Wis.           | Internal cast of a small calyx.                                                                       |
| .....                  | As <i>Hypanthocrinites decorus</i> .                                                                  |
| Lockport, N. Y.        | Upper half of a large individual.                                                                     |
| “ “                    | Two individuals, one retaining some of column ; imbedded.                                             |
| “ “                    | Shows longitudinal section of arms and tentacles.                                                     |
| Racine, Wis.           | Internal cast of an average individual.                                                               |
| “ “                    | Well preserved imprint of exterior of base.                                                           |

Subkingdom ECHINODERMATA—Continued.

| Geol. Subdiv. | Cat. No.                 | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.            | REFERENCE.  |        |     |        |          |
|---------------|--------------------------|--------------------|---------------------------------------|-------------|--------|-----|--------|----------|
|               |                          |                    |                                       | Work.       | Vol.   | P.  | Pl.    | Figs.    |
| Niag.         | <u>2042</u> <sub>1</sub> | Type.              | <b>Eucalyptocrinus</b> Goldf.-Cont.   |             |        |     |        |          |
|               | 1891                     | Fig'd.             | ornatus .....Hall.                    | N. Y. S. M. | 20     | 329 | 11     | 5        |
|               | 1721                     | Type.              | ovalis ( <i>Troost</i> )....Hall.     | " "         | 28     | 143 | 17     | 12, 13   |
|               | 1889                     | Fig'd.             | papulosus.....Hall.                   | Pal. N. Y.  | 2      | 211 | 47     | 5a, b    |
|               | "                        | "                  | sp .....Hall.                         | N. Y. S. M. | 28     | 144 | 19     | 6, 7     |
|               | "                        | "                  | " ..... "                             | " "         | 28     | 144 | 19     | 8        |
| "             | "                        | "                  | " ..... "                             | " "         | 28     | 144 | 20     | 1        |
| "             |                          |                    | <b>Glyptaster</b> Hall.               |             |        |     |        |          |
|               | 1718                     | Gen. and Sp. Type. | brachiatus .....Hall.                 | Pal. N. Y.  | 2      | 187 | 41     | 4a, b    |
|               | 1903                     | Type.              | inornatus. ....Hall.                  | T. A. I.    | 4      | 205 |        |          |
|               | <u>1902</u> <sub>1</sub> | "                  | "                                     | N. Y. S. M. | 28     | 134 | 14     | 1-6      |
|               | "                        | "                  | occidentalis .....Hall.               | T. A. I.    | 4      | 204 |        |          |
|               | <u>1902</u> <sub>2</sub> | "                  | " ..... "                             | N. Y. S. M. | 28     | 133 | 13     | 7-11     |
| "             | 2034                     | "                  | " ..... "                             | " "         | 20     | 326 | 10     | 3        |
| "             |                          |                    | pentangularis.....Hall.               | " "         | 20     | 326 | 10     | 4        |
| "             |                          |                    | <b>Glyptocrinus</b> Hall.             |             |        |     |        |          |
|               | 2036                     | Fig'd.             | armosus ( <i>McChesney</i> ) H. Hall. | Geol. Wis.  | 1861   | 22  | .....  | .....    |
|               |                          |                    |                                       | N. Y. S. M. | 20     | 328 | .....  | .....    |
|               |                          |                    |                                       |             |        |     | 10     | 11       |
|               | 1904                     | Type.              | Carleyi .....Hall.                    | T. A. I.    | 4      | 203 |        |          |
|               | "                        | "                  | " ..... "                             | N. Y. S. M. | 28     | 132 | 14     | 7        |
|               | "                        | "                  | " ..... "                             | " "         | 28     | 132 | 14     | 8-10     |
|               | 2035                     | "                  | nobilis .....Hall.                    | Geol. Wis.  | 1861   | 21  |        |          |
|               | "                        | "                  | " ..... "                             | N. Y. S. M. | 20     | 328 | 10     | 9        |
|               | "                        | "                  | " ..... "                             | " "         | 20     | 328 | 10     | 10       |
| Cl.           | <u>1484</u> <sub>1</sub> | "                  | plumosus .....Hall.                   | Pal. N. Y.  | 2      | 180 | A41    | 3a, b    |
| "             | <u>1484</u> <sub>2</sub> | "                  | " ..... "                             | " "         | 2      | 180 | A41    | 3c       |
| "             |                          |                    | <i>siphonatus</i> .....Hall.          |             |        |     |        |          |
|               | 1483                     | Fig'd.             | sp .....Hall.                         | Pal. N. Y.  | 2      | 181 | A41    | 4        |
| Niag.         |                          |                    | <b>Homocrinus</b> Hall.               |             |        |     |        |          |
|               | 1706                     | Type.              | cylindricus.....Hall.                 | Pal. N. Y.  | 2      | 186 | 41     | 2a-c     |
|               | "                        | "                  | " ..... "                             | " "         | 2      | 186 | 41     | 3a-c     |
|               | 1705                     | Gen. and Sp. Type. | parvus .....Hall.                     | " "         | 2      | 185 | 41     | 1a, d, f |
|               | "                        | "                  | " ..... "                             | " "         | 2      | 185 | 41     | 1b, c, e |
| L. H.         | <u>2294</u> <sub>1</sub> | Type.              | scoparius .....Hall.                  | " "         | 3      | 102 | 1      | 1-9      |
| Cl.<br>Niag.  |                          |                    | <b>Hypanthocrinites</b> Phillips.     |             |        |     |        |          |
|               |                          |                    | <i>decorus</i> .....Hall.             |             |        |     |        |          |
|               |                          |                    | <b>Ichthyocrinus</b> Conrad.          |             |        |     |        |          |
|               | 1482                     | Type.              | ? clintonensis.....Hall.              | Pal. N. Y.  | 2      | 181 | A41    | 5        |
|               | <u>1712</u> <sub>1</sub> | Fig'd.             | laevis ( <i>Con.</i> ).....Hall.      | Geol. N. Y. | 4th D. | 112 | P. 111 | 3        |
|               | "                        | "                  | " ..... "                             | Pal. N. Y.  | 2      | 195 | 43     | 2a       |
|               | "                        | "                  | " ..... "                             | " "         | 2      | 195 | 43     | 2b-m     |
|               | <u>1900</u> <sub>1</sub> | Type.              | subangularis .....Hall.               | T. A. I.    | 4      | 201 |        |          |
|               | "                        | "                  | " ..... "                             | N. Y. S. M. | 28     | 137 | 16     | 11-13    |
|               | <u>1900</u> <sub>2</sub> | "                  | " ..... "                             | " "         | 20     | 325 | 11     | 15       |
| "             |                          |                    | <b>Lampterocrinus</b> Roemer.         |             |        |     |        |          |
|               | 2033                     | "                  | inflatus .....Hall.                   | Geol. Wis.  | 1861   | 22  | .....  | .....    |
|               |                          |                    | " ..... "                             | N. Y. S. M. | 20     | 328 | 10     | 6        |
| "             |                          |                    | <b>Lecanocrinus</b> Hall.             |             |        |     |        |          |
|               | 1716                     | "                  | caliculus .....Hall.                  | Pal. N. Y.  | 2      | 203 | 46     | 3a, b    |
|               | 1715                     | Gen. and Sp. Type. | macropetalus .....Hall.               | " "         | 2      | 199 | 45     | 1b-f     |



Class CRINOIDEA—Continued.

| LOCALITY.              | REMARKS.                                                                                                                         |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Racine, Wis.           | Internal cast of a large calyx.                                                                                                  |
| Waldron, Ind.          | A very perfect individual, imbedded.                                                                                             |
| Sweden, N. Y.          | Part of a large calyx.                                                                                                           |
| Waldron, Ind.          | Two sets of roots on a calyx of <i>E. cælatus</i> Hall.                                                                          |
| “ “                    | Large, spreading set of roots imbedded in shale.                                                                                 |
| “ “                    | Very large, “ “ “ “ “                                                                                                            |
| Lockport, N. Y.        | An individual imbedded with its arms extended.                                                                                   |
| Waldron, Ind.          | Four imperfect calyces.                                                                                                          |
| “ “                    | Two imbedded calyces, one very perfect.                                                                                          |
| Racine, Wis.           | A well marked internal cast of the calyx.                                                                                        |
| “ “                    | Internal cast of a calyx.                                                                                                        |
| .....                  | As type of <i>Glyptocrinus siphonatus</i> Hall.                                                                                  |
| .....                  | “ “ “ “ “ in the text.                                                                                                           |
| Racine, Wis.           | Internal cast of a large calyx.                                                                                                  |
| Waldron, Ind.          | Half a calyx of some other species. Too poor for description.                                                                    |
| “ “                    | A nearly entire calyx.                                                                                                           |
| Racine, Wis.           | Exterior imprint of a large calyx with its proboscis.                                                                            |
| “ “                    | Internal cast of a large calyx, nearly entire.                                                                                   |
| Reynale’s Basin, N.Y.  | Most of a tentaculated finger, imbedded.                                                                                         |
| Medina, N. Y.          | Fragment of a small column, imbedded.                                                                                            |
| .....                  | See <i>Glyptocrinus armosus</i> .                                                                                                |
| Reynale’s Basin, N. Y. | A large detached column disc.                                                                                                    |
| Lockport, N. Y.        | Body and part of column, imbedded.                                                                                               |
| “ “                    | A somewhat crushed body.                                                                                                         |
| “ “                    | Body with part of arms and stem, imbedded.                                                                                       |
| “ “                    | Part of body with most of arms, imbedded. Same block bears <i>Callopora</i> , n. s., figs. 6a, b, pl. 40.                        |
| Litchfield, N. Y.      | Six blocks containing twenty bodies w. arms and one long frag. of stem. Made the type of the revised genus by Wachs. & Springer. |
| .....                  | See <i>Eucalyptocrinus decorus</i> .                                                                                             |
| Reynale’s Basin, N. Y. | Fragment showing several arms in part.                                                                                           |
| .....                  | As <i>Cyathocrinites pyriformis</i> Murchison.                                                                                   |
| Lockport, N. Y.        | Slightly compressed individual, imbedded.                                                                                        |
| “ “                    | Four individuals, more or less compressed.                                                                                       |
| Waldron, Ind.          | A small and a large imperfect calyx.                                                                                             |
| Racine, Wis.           | Imperfect, but preserving the substance of the calyx.                                                                            |
| .....                  | As <i>Balanocrinus inflatus</i> .                                                                                                |
| Racine, Wis.           | Well marked internal cast of calyx.                                                                                              |
| Lockport, N. Y.        | A small calyx.                                                                                                                   |
| “ “                    | A large and a small individual.                                                                                                  |

Subkingdom ECHINODERMATA—Continued.

| Geol. Subdiv. | Cat. No.  | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.             | REFERENCE.  |                |       |        |         |
|---------------|-----------|--------------------|----------------------------------------|-------------|----------------|-------|--------|---------|
|               |           |                    |                                        | Work.       | Vol.           | P.    | Pl.    | Figs.   |
| Niag.         | 1899      | Type.              | <b>Lecanocrinus</b> Hall— <i>Cont.</i> |             |                |       |        |         |
|               |           |                    | pusillus .....Hall.                    | T. A. I.    | 4              | 200   | ....   | .....   |
|               |           |                    | “ “ “                                  | N. Y. S. M. | 28,<br>1st ed. | ....  | 15     | 1-6     |
|               |           |                    | “ “ “                                  | “ “         | 28,<br>2d ed.  | 136   | 15     | 1-6     |
|               |           |                    | <b>Lyriocrinus</b> Hall.               |             |                |       |        |         |
| “             | 1714      | Gen. and Sp. Type. | dactylus .....Hall.                    | Geol. N. Y. | 4th D.         | 114   | P. 113 | 4       |
| “             | “         | “                  | “ “ “                                  | Pal. N. Y.  | 2              | 197   | 44     | 1a, d   |
| “             | “         | “                  | “ “ “                                  | “ “         | 2              | 197   | 44     | 1c, c†  |
| “             | 1901      | Type.              | melissa .....Hall.                     | T. A. I.    | 4              | 198   | ....   | .....   |
|               |           |                    | “ “ “                                  | N. Y. S. M. | 28             | 139   | 15     | 18-27   |
|               |           |                    | <b>Macrostylocrinus</b> Hall.          |             |                |       |        |         |
| “             | 1896      | “                  | fasciatus .....Hall.                   | “ “         | 28             | 130   | 13     | 5, 6    |
| “             | 1895<br>1 | “                  | striatus .....Hall.                    | T. A. I.    | 4              | 207   |        |         |
|               |           |                    | “ “ “                                  | N. Y. S. M. | 28             | 129   | 13     | 1-4     |
| “             | 1895<br>2 | “                  | “ “ “                                  | “ “         | 20             | 327   | 10     | 7, 8    |
|               |           |                    | <b>Mariacrinus</b> Hall.               |             |                |       |        |         |
|               |           |                    | macropetalus.....                      | .....       | .....          | ..... | .....  | .....   |
|               |           |                    | nobilissimus.....                      | .....       | .....          | ..... | .....  | .....   |
|               |           |                    | pachydactylus.....                     | .....       | .....          | ..... | .....  | .....   |
| L. H.         | 2298<br>2 | Type.              | stoloniferus .....Hall.                | Pal. N. Y.  | 3              | 112   | 3A     | 2       |
| “             | 2298<br>3 | “                  | “ “ “                                  | “ “         | 3              | 112   | 3B     | 3       |
| “             | 2298<br>1 | “                  | “ “ “                                  | “ “         | 3              | 112   | 3B     | 4-7     |
|               |           |                    | <b>Marsupiocrinus</b> Phillips.        |             |                |       |        |         |
|               |           |                    | dactylus.....                          | .....       | .....          | ..... | .....  | .....   |
| L. H.         | 2303      | Type.              | tentaculatus .....Hall.                | Pal. N. Y.  | 3              | 116   | 5      | 1-4     |
|               |           |                    | <b>Melocrinus</b> Goldfuss.            |             |                |       |        |         |
| “             | 2297<br>1 | “                  | nobilissimus .....Hall.                | “ “         | 3              | 105   | 2      | 1-3, 5  |
| “             | “         | “                  | “ “ “                                  | “ “         | 3              | 105   | 2      | 4, enl. |
| Niag.         | 1894      | “                  | obconicus .....Hall.                   | T. A. I.    | 4              | 206   |        |         |
|               |           |                    | “ “ “                                  | N. Y. S. M. | 28             | 138   | 14     | 11-14   |
| L. H.         | 2304      | Fig'd.             | pachydactylus (Con.) H.                | Pal. N. Y.  | 3              | 107   | 3      | 3, 4a   |
| Niag.         | 1722      | Type.              | sculptus .....Hall.                    | “ “         | 2              | 228   | 49a    | 2a, b   |
| “             | “         | “                  | “ “ “                                  | “ “         | 2              | 228   | 49a    | 2c      |
| “             | 2030      | Fig'd.             | Verneuili (Troost) Hall.               | N. Y. S. M. | 20             | 327   | 10     | 5       |
|               |           |                    | <b>Myelodactylus</b> Hall.             |             |                |       |        |         |
| “             | 1707      | Type.              | brachiatus .....Hall.                  | Pal. N. Y.  | 2              | 232   | 45     | 7d, e   |
| “             | 1708      | Gen. and Sp. Type. | convolutus .....Hall.                  | “ “         | 2              | 192   | 42     | 6a-h    |
| “             | 1709      | Fig'd.             | sp .....Hall.                          | “ “         | 2              | 232   | 45     | 8, 9    |
|               |           |                    | <b>Platycrinus</b> Miller.             |             |                |       |        |         |
|               |           |                    | parvus.....                            | .....       | .....          | ..... | .....  | .....   |
|               |           |                    | plumulosus.....                        | .....       | .....          | ..... | .....  | .....   |
|               |           |                    | tentaculatus.....                      | .....       | .....          | ..... | .....  | .....   |
|               |           |                    | <b>Rhodocrinus</b> Miller.             |             |                |       |        |         |
|               |           |                    | melissa.....                           | .....       | .....          | ..... | .....  | .....   |
| Niag.         | 2037      | Type.              | ? rectus .....Hall.                    | N. Y. S. M. | 20             | 318   | ....   | .....   |
|               |           |                    | “ “ “                                  | “ “         | 20             | 379   | 10     | 2       |



Class CRINOIDEA—Continued.

| LOCALITY.            | REMARKS.                                                                                                |
|----------------------|---------------------------------------------------------------------------------------------------------|
| .....                | As <i>Cyathocrinus pusillus</i> .                                                                       |
| .....                | “ “ “                                                                                                   |
| Waldron, Ind.        | The lower halves of two calyces.                                                                        |
| .....                | As <i>Marsupiocrinites</i> (?) <i>dactylus</i> .                                                        |
| Lockport, N. Y.      | Individual preserving most of the arms, imbedded.                                                       |
| “ “                  | Small calyx with parts of arm and column, imbedded. An unfig-<br>ured type is in the series.            |
| .....                | As <i>Rhodocrinus melissa</i> .                                                                         |
| Waldron, Ind.        | “ <i>R. (Lyriocrinus)</i> “ One entire and five more or less entire calyces.                            |
| “ “                  | A small calyx, nearly entire.                                                                           |
| “ “                  | Two armless calyces, imbedded.                                                                          |
| Racine, Wis.         | Exterior imprint and internal cast of same calyx.                                                       |
| .....                | See <i>Corymbocrinus macropetalus</i> .                                                                 |
| .....                | “ <i>Melocrinus nobilissimus</i> .                                                                      |
| .....                | “ <i>Melocrinus pachydactylus</i> .                                                                     |
| Schoharie, N. Y.     | Short fragment of a thick column. The species was founded on<br>such fragments alone.                   |
| Albany Co., N. Y.    | Fragment of slender column, imbedded.                                                                   |
| Nr. Schoharie, N. Y. | Four fragments of columns ; three of which are imbedded.                                                |
| .....                | See <i>Lyriocrinus dactylus</i> .                                                                       |
| Litchfield, N. Y.    | As <i>Platycrinus tentaculatus</i> , but referred here by Wachs. & Spring.<br>Calyx and arms, imbedded. |
| “ “                  | As type of genus <i>Mariacrinus</i> . A very large calyx with arms<br>nearly entire, imbedded.          |
| “ “                  | As <i>Mariacrinus nobilissimus</i> . Several detached arms showing ten-<br>tacula very perfectly.       |
| Waldron, Ind.        | An entire calyx without arms. Referred to <i>Mariacrinus</i> (emend.)<br>by Wachsmuth & Springer.       |
| Schoharie, N. Y.     | As <i>Mariacrinus pachydactylus</i> . The arms of a large individual.                                   |
| Lockport, N. Y.      | As <i>Melocrinites sculptus</i> . Large individual, imbedded.                                           |
| “ “                  | “ “ Base imbedded so as to show the interior.                                                           |
| Racine, Wis.         | Internal cast of a calyx. Probably = <i>M. lævis</i> Roemer, according<br>to Wachsmuth & Springer.      |
| Lockport, N. Y.      | A coiled fragment of stem.                                                                              |
| “ “                  | Two short fragments of columns.                                                                         |
| “ “                  | Two fragments of columns.                                                                               |
| .....                | See <i>Cordylocrinus parvus</i> .                                                                       |
| .....                | “ “ <i>plumulosus</i> .                                                                                 |
| .....                | “ <i>Marsupiocrinus tentaculatus</i> .                                                                  |
| .....                | See <i>Lyriocrinus melissa</i> .                                                                        |
| .....                | As <i>Crinocystites</i> ? <i>rectus</i> .                                                               |
| Racine, Wis.         | Imperfect internal cast of a calyx.                                                                     |

Subkingdom ECHINODERMATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                    | REFERENCE.              |         |            |           |                    |
|---------------|------------------|--------------------|---------------------------------------------------------------|-------------------------|---------|------------|-----------|--------------------|
|               |                  |                    |                                                               | Work.                   | Vol.    | P.         | Pl.       | Figs.              |
| Niag.         | 1892             | Type.              | <b>Saccocrinus</b> Hall.<br>Christyi . . . . . Hall.          | T. A. I.<br>N. Y. S. M. | 4<br>28 | 196<br>127 | ...<br>13 | .....<br>12-20     |
| "             | <u>2028</u><br>1 | "                  | semiradiatus . . . . . Hall.                                  | " "                     | 20      | 379        | 10        | I                  |
| "             | <u>1703</u><br>1 | Fig'd.             | <b>Stephanocrinus</b> Conrad.<br>angulatus (Con.) . . . Hall. | Pal. N. Y.              | 2       | 212        | 48        | 1a                 |
| "             | "                | "                  | " " " "                                                       | " "                     | 2       | 212        | 48        | 1b-m               |
| "             | "                | "                  | " " " " W. & S.                                               | M. M. C. Z.             | 20      | ....       | 8         | 12, 13             |
| "             | 1704             | Type.              | gemmiformis . . . . . Hall.                                   | Pal. N. Y.              | 2       | 215        | 48        | 2a-f               |
| "             | 1905             | "                  | " " " " " "                                                   | N. Y. S. M.             | 28      | 146        | 14        | 15-20              |
| "             | "                | "                  | <b>Thysanocrinus</b> Hall.<br>aculeatus . . . . . Hall.       | Pal. N. Y.              | 2       | 190        | 42        | 3a-c               |
| "             | 1724             | "                  | canaliculatus . . . . . Hall.                                 | " "                     | 2       | 189        | 42        | 2c, enl.           |
| "             | 1725             | "                  | immaturus . . . . . Hall.                                     | " "                     | 2       | 191        | 42        | 4a-f               |
| "             | 1723             | Gen. and Sp. Type. | liliiformis . . . . . Hall.                                   | " "                     | 2       | 188        | 42        | 1d, enl.           |
| Cl.           | 1479             | Fig'd.             | Genus? species? . . . . Hall.                                 | " "                     | 2       | 181        | A41       | 6a-c               |
| "             | <u>1476</u><br>1 | "                  | " " " " " "                                                   | " "                     | 2       | 182        | A41       | 7c                 |
| Niag.         | 1727             | "                  | Columns of crinoids . . Hall.                                 | Geol. N. Y.             | 4th D.  | 90         | ct. 26    | I                  |
| "             | "                | "                  | " " " " " "                                                   | Pal. N. Y.              | 2       | 230        | 44        | 3a-d, 6a-c         |
| "             | "                | "                  | " " " " " "                                                   | " "                     | 2       | 230        | 44        | 4a, b              |
| "             | "                | "                  | " " " " " "                                                   | " "                     | 2       | 230        | 44        | 7a-c               |
| "             | "                | "                  | " " " " " "                                                   | " "                     | 2       | 230        | 44        | 8                  |
| "             | "                | "                  | " " " " " "                                                   | " "                     | 2       | 230        | 44        | 9a-c               |
| "             | "                | "                  | " " " " " "                                                   | " "                     | 2       | 231        | 45        | 4a-d, 6a-c         |
| "             | "                | "                  | " " " " " "                                                   | " "                     | 2       | 231        | 45        | 10a, b             |
| L. H.         | <u>2301</u><br>1 | "                  | " " " " " "                                                   | " "                     | 3       | 125        | 3A        | 3, 5, 7,<br>13, 14 |
| "             | "                | "                  | " " " " " "                                                   | " "                     | 3       | 125        | 6         | 7-10               |
| Niag.         | 1727             | "                  | Plates of crinoids . . . . Hall.                              | " "                     | 2       | 230        | 49a       | 5-7                |

Class CYSTOIDEA.

|       |                  |                    |                                                          |             |        |      |           |                 |
|-------|------------------|--------------------|----------------------------------------------------------|-------------|--------|------|-----------|-----------------|
| L. H. | 2288             | Gen. and Sp. Type. | <b>Anomalocystites</b> Hall.<br>cornutus . . . . . Hall. | Pal. N. Y.  | 3      | 133  | 7A        | 5-7a            |
| Niag. | 1699             | Type.              | <b>Apiocystites</b> Forbes.<br>elegans . . . . . Hall.   | " "         | 2      | 243  | 5I        | 3               |
| "     | 2025             | "                  | imago . . . . . Hall.                                    | N. Y. S. M. | 20     | 314  | 12<br>12a | 12<br>9         |
| "     | 1698             | Gen. and Sp. Type. | <b>Callocystites</b> Hall.<br>Jewetti . . . . . Hall.    | Pal. N. Y.  | 2      | 239  | 50        | 17, 18          |
| "     | <u>1702</u><br>1 | Fig'd.             | <b>Caryocrinus</b> Say.<br>ornatus (Say) . . . . Hall.   | Geol. N. Y. | 4th D. | 112  | p. III    | I, 2            |
| "     | "                | "                  | " " " " " "                                              | Pal. N. Y.  | 2      | 216  | 49        | 1b, c           |
| "     | "                | "                  | " " " " " "                                              | " "         | 2      | 216  | 49        | 1a, d-g, z      |
| "     | "                | "                  | " " " " " "                                              | " "         | 2      | 216  | 49        | 1h              |
| "     | "                | "                  | " " " " " "                                              | " "         | 2      | 216  | 49        | 1i              |
| "     | "                | "                  | " " " " " "                                              | " "         | 2      | 216  | 49        | 1n†, o,<br>s-t† |
| "     | "                | "                  | " " " " " "                                              | " "         | 2      | 216  | 49        | 1u              |
| "     | "                | "                  | " " " " " "                                              | " "         | 2      | 216  | 49        | 1v              |
| "     | "                | "                  | " " " " " "                                              | " "         | 2      | 216  | 49a       | 1f              |
| "     | <u>1702</u><br>2 | "                  | " " " " " "                                              | N. Y. S. M. | 20     | .... | 11        | 17              |



Class CRINOIDEA—Continued.

| LOCALITY.             | REMARKS.                                                                                                                            |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| .....                 | As <i>Actinocrinus Christyi</i> .                                                                                                   |
| Waldron, Ind.         | Five armless calyces.                                                                                                               |
| Racine, Wis.          | As <i>Actinoc. (Saccocrinus) semiradiatus</i> . Half of an internal cast of medium size.                                            |
| Lockport, N. Y.       | Medium-sized individual with stem, imbedded.                                                                                        |
| “ “                   | Ten more or less entire calyces. Originals of figs. 1f, i of Hall are those redrawn by W. & S. Fig. 13 is an enl. to two diameters. |
| “ “                   | Two calyces without arms.                                                                                                           |
| Waldron, Ind.         | “ “ “ “                                                                                                                             |
| Lockport, N. Y.       | Part of the arms of a large individual.                                                                                             |
| “ “                   | Small fragment of an arm.                                                                                                           |
| “ “                   | An incomplete calyx.                                                                                                                |
| “ “                   | Small fragment of an arm.                                                                                                           |
| Ontario, N. Y.        | Tentaculate arms, imbedded.                                                                                                         |
| Mohawk, N. Y.         | A thick column-disc in iron ore. From Steel's Creek.                                                                                |
| Lockport, N. Y.       | Weathered slab showing many fragments of columns.                                                                                   |
| “ “                   | Three fragments.                                                                                                                    |
| “ “                   | Small, coiled stem, imbedded.                                                                                                       |
| “ “                   | Base, with beginnings of rootlets.                                                                                                  |
| “ “                   | Base, with many rootlets, imbedded.                                                                                                 |
| “ “                   | Base, with rootlets, small.                                                                                                         |
| “ “                   | Two fragments.                                                                                                                      |
| “ “                   | Base, with rootlets, rather large.                                                                                                  |
| Schoharie, N. Y.      | Five fragments and discs of columns.                                                                                                |
| Near Schoharie, N. Y. | Four blocks bearing nodose columns.                                                                                                 |
| Lockport, N. Y.       | Two heptagonal and one hexagonal plate, the last is imbedded.                                                                       |
| Litchfield, N. Y.     | Two individuals imbedded with two others. Probably a crustacean.                                                                    |
| Lockport, N. Y.       | A small, somewhat crushed individual. Some of the other figures may also have been made from it.                                    |
| Racine, Wis.          | A nearly entire body.                                                                                                               |
| Lockport, N. Y.       | Small fragment of stem.                                                                                                             |
| “ “                   | A large body which is poorly represented by the figures.                                                                            |
| “ “                   | Five bodies of different sizes and showing some variation in shape.                                                                 |
| “ “                   | A small body with parts of three arms attached.                                                                                     |
| “ “                   | Fragments of arms of a large individual, imbedded.                                                                                  |
| “ “                   | Three body plates.                                                                                                                  |
| “ “                   | Part of a body imbedded so as to show its interior.                                                                                 |
| “ “                   | A body of medium size.                                                                                                              |
| “ “                   | A globular body.                                                                                                                    |
| Racine, Wis.          | A nearly entire internal cast of a body.                                                                                            |

Class CYSTOIDEA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.              | Type or<br>Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.          | REFERENCE.  |       |       |           |                         |
|------------------|--------------------------|-----------------------|-------------------------------------|-------------|-------|-------|-----------|-------------------------|
|                  |                          |                       |                                     | Work.       | Vol.  | P.    | Pl.       | Figs.                   |
| Niag.            | <u>2023</u><br>1         | Gen. and<br>Sp. Type. | <b>Caryocystites</b> Von Buch.      |             |       |       |           |                         |
|                  |                          |                       | <i>alternatus</i> .....             | .....       | ..... | ..... | .....     | .....                   |
|                  |                          |                       | <i>cylindricus</i> .....            | .....       | ..... | ..... | .....     | .....                   |
|                  | 2024                     | Gen. and<br>Sp. Type. | <b>Crinocystites</b> Hall.          |             |       |       |           |                         |
|                  |                          |                       | <i>chrysalis</i> .....Hall.         | N. Y. S. M. | 20    | 318   | 12a       | 10, 11                  |
|                  |                          |                       | <i>rectus</i> .....                 | .....       | ..... | ..... | .....     | .....                   |
|                  | 2026                     | Type.                 | <b>Echinocystites</b> Hall.         |             |       |       |           |                         |
|                  |                          |                       | <i>nodosus</i> .....Hall.           | N. Y. S. M. | 20    | 316   | 12        | 10, 11                  |
|                  |                          |                       | <b>Gomphocystites</b> Hall.         |             |       |       |           |                         |
|                  | 1700                     | Gen. and<br>Sp. Type. | <i>glans</i> .....Hall.             | " "         | 20    | 310   | 12<br>12a | 14<br>4                 |
|                  |                          |                       | <i>tenax</i> .....Hall.             | " "         | 20    | 310   | 12<br>12a | 15, <i>enl.</i><br>1, 2 |
|                  |                          |                       | <b>Hemicosmites</b> Von Buch.       |             |       |       |           |                         |
|                  | 2027                     | Type.                 | <i>subglobosus</i> .....Hall.       | " "         | 20    | 316   | 12        | 13                      |
|                  |                          |                       | <b>Hemicystites</b> Hall.           |             |       |       |           |                         |
|                  |                          |                       | <i>parasiticus</i> .....Hall.       | Pal. N. Y.  | 2     | 246   | 51        | 18-20                   |
|                  | 2016<br>2020             | Type.                 | <b>Holocystites</b> Hall.           |             |       |       |           |                         |
|                  |                          |                       | <i>abnormis</i> .....Hall.          | N. Y. S. M. | 20    | 312   | 12        | 7, 8                    |
|                  |                          |                       | <i>alternatus</i> .....Hall.        | Geol. Wis.  | 1861  | 23    | .....     | .....                   |
|                  | <u>2018</u><br>2         | Gen. and<br>Sp. Type. | "                                   | " "         | 1     | 69    | ct. 16    | 2                       |
|                  |                          |                       | "                                   | N. Y. S. M. | 20    | 312   | 12<br>12a | 9<br>6                  |
|                  |                          |                       | <i>cylindricus</i> .....Hall.       | Geol. Wis.  | 1861  | 23    | .....     | .....                   |
|                  | 2018<br>1                | "                     | "                                   | " "         | 1     | 69    | ct. 16    | 1                       |
|                  |                          |                       | "                                   | N. Y. S. M. | 20    | 311   | 12<br>12a | 4<br>7                  |
|                  |                          |                       | "                                   | " "         | 20    | 311   | 12<br>12a | 5, 6<br>8               |
|                  | 2021<br><u>2019</u><br>1 | Type.                 | <i>ovatus</i> .....Hall.            | " "         | 20    | 313   | 12        | 2                       |
|                  |                          |                       | <i>scutellatus</i> .....Hall.       | " "         | 20    | 314   | 12        | 1                       |
|                  |                          |                       | <i>Winchelli</i> .....Hall.         | " "         | 20    | 313   | 12        | 3                       |
|                  | 2017                     | "                     | <b>Lepadocrinus</b> Conrad.         |             |       |       |           |                         |
|                  |                          |                       | <i>Gebhardi</i> (Con.)....Hall.     | Pal. N. Y.  | 3     | 127   | 7         | 5                       |
|                  |                          |                       | " " "                               | " "         | 3     | 127   | 7         | 6                       |
|                  | 2017                     | "                     | " " "                               | " "         | 3     | 127   | 7         | 10, 11                  |
|                  |                          |                       | " " "                               | " "         | 3     | 127   | 7         | 15, 16,<br>20-22        |
|                  |                          |                       | <b>Sphærocystites</b> Hall.         |             |       |       |           |                         |
|                  | 2287                     | Gen. and<br>Sp. Type. | <i>multifasciatus</i> .....Hall.    | " "         | 3     | 130   | 7A        | 1-4a                    |
|                  |                          |                       | <b>Fragments of cystoids.</b> Hall. | " "         | 2     | 242   | 50        | 19-28                   |
|                  |                          |                       |                                     |             |       |       |           |                         |

Class ASTEROIDEA.

|       |      |       |                           |             |    |     |   |      |
|-------|------|-------|---------------------------|-------------|----|-----|---|------|
| L. H. | 2302 | Type. | <b>Protaster</b> Forbes.  |             |    |     |   |      |
|       |      |       | <i>Forbesi</i> .....Hall. | N. Y. S. M. | 20 | 293 | 9 | 5, 6 |



| LOCALITY.         | REMARKS.                                                          |
|-------------------|-------------------------------------------------------------------|
| .....             | See <i>Holocystites alternatus</i> .                              |
| .....             | “ “ <i>cylindricus</i> .                                          |
| Racine, Wis.      | Nearly entire internal cast.                                      |
| .....             | See <i>Rhodocrinus rectus</i> .                                   |
| Racine, Wis.      | Internal cast of medium size.                                     |
| “ “               | Cast of a large body.                                             |
| Wolcott, N. Y.    | Upper part of a small body. Enlarged to two diameters in figures. |
| Racine, Wis.      | An imperfect cast.                                                |
| Lockport, N. Y.   | Part of the individual has been broken off and lost.              |
| Racine, Wis.      | Two strongly marked casts.                                        |
| .....             | As <i>Caryocystites alternatus</i> .                              |
| .....             | “ “ “                                                             |
| Racine, Wis.      | Large, strongly marked internal cast.                             |
| .....             | As <i>Caryocystites cylindricus</i> .                             |
| .....             | “ “ “                                                             |
| Grafton, Wis.     | Large and well preserved internal cast.                           |
| Waukesha, Wis.    | Two smaller, well preserved internal casts.                       |
| “ “               | Large internal cast.                                              |
| “ “               | “ “ “                                                             |
| “ “               | Internal cast, imperfect at base and summit.                      |
| Schoharie, N. Y.  | A weathered and crushed indiv. preserving whole length of column. |
| “ “               | Imbedded ; preserves column ; somewhat crushed.                   |
| “ “               | A small, crushed body and a large pectinated rhomb.               |
| “ “               | Parts of a large and two small columns.                           |
| Cumberland, Md.   | Large, silicified body.                                           |
| Lockport, N. Y.   | Three fragmentary columns and two body plates.                    |
| Litchfield, N. Y. | Nearly entire, imbedded.                                          |

MOLLUSCOIDEA.

| Geol. Subdiv. | Cat. No.  | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR. | REFERENCE.   |             |       |       |             |
|---------------|-----------|--------------------|----------------------------|--------------|-------------|-------|-------|-------------|
|               |           |                    |                            | Work.        | Vol.        | P.    | Pl.   | Figs.       |
| Niag. L. H.   | 1742 2305 | Type. “            | <b>Callopora</b> Hall.     |              |             |       |       |             |
|               |           |                    | aspera .....Hall.          | Pal. N. Y.   | 2           | 147   | 40    | 4a-i        |
|               |           |                    | cellulosa.....Hall.        | N. Y. S. M.  | 32          | 154   |       |             |
|               |           |                    | “                          | St. G. N. Y. | 2           | ....  | 12    | 8, 9        |
|               |           |                    | H. & S.                    | Pal. N. Y.   | 6           | 21    | 12    | 8, 9        |
|               |           |                    |                            |              |             |       | 23A   | 6, enl.     |
| “             | “         | “                  | “ .....Hall.               | N. Y. S. M.  | 32          | 154   | ....  | ....        |
|               |           |                    | “                          | St. G. N. Y. | 2           | ....  | 12    | 1-3, 6      |
|               |           |                    | H. & S.                    | Pal. N. Y.   | 6           | 21    | 12    | 1-3, 6      |
| Niag.         | 1746      | Gen. and Sp. Type. | elegantula .....Hall.      | “ “          | 2           | 144   | 40    | 1a, b       |
| “             | “         | “                  | “ ..... “                  | “ “          | 2           | 144   | 40    | 1c-n        |
|               |           |                    |                            |              |             |       | 40A   | 14, enl.    |
| “             | 1924      | Type.              | exsul.....Hall.            | N. Y. S. M.  | 28, 1st ed. | ....  | 9     | 3, 4        |
|               |           |                    | “                          | “ “          | 28, 2d ed.  | 115   | 9     | 3, 4        |
| Niag.         | 1744 1745 | Type. “            | fistulosa.....             | .....        | .....       | ..... | ..... | .....       |
|               |           |                    | florida.....Hall.          | Pal. N. Y.   | 2           | 146   | 40    | 2a-f        |
| “             |           |                    | laminata .....Hall.        | “ “          | 2           | 146   | 40    | 3a-e        |
|               |           |                    | macropora .....            | .....        | .....       | ..... | ..... | .....       |
|               |           |                    | “ var. signata..           | .....        | .....       | ..... | ..... | .....       |
| Niag.         | 1743      | Type.              | maculosa.....              | .....        | .....       | ..... | ..... | .....       |
|               |           |                    | nummiformis .....Hall.     | Pal. N. Y.   | 2           | 148   | 40    | 5a, b       |
|               |           |                    | parasitica .....           | .....        | .....       | ..... | ..... | .....       |
| L. H.         | 2306      | Type.              | perelegans .....Hall.      | N. Y. S. M.  | 26          | 102   |       |             |
|               |           |                    | “                          | St. G. N. Y. | 2           | ....  | 12    | 14          |
|               |           |                    | H. & S.                    | Pal. N. Y.   | 6           | 22    | 12    | 14          |
| Niag.         | 1925      | “                  | singularis.....Hall.       | N. Y. S. M.  | 28          | 115   | 10    | 1, 2        |
|               |           |                    | unispina .....             | .....        | .....       | ..... | ..... | .....       |
| Niag.         | 1705      | Fig'd.             | venusta .....              | .....        | .....       | ..... | ..... | .....       |
|               |           |                    | sp.? .....Hall.            | Pal. N. Y.   | 2           | ....  | 40    | 6a, b       |
| L. H.         | 2309      | Gen. and Sp. Type. | <b>Callotrypa</b> Hall.    |              |             |       |       |             |
|               |           |                    | macropora.....Hall.        | N. Y. S. M.  | 26          | 101   | ....  | .....       |
|               |           |                    | “                          | St. G. N. Y. | 2           | ....  | 11    | 25, 26      |
|               |           |                    | H. & S.                    | Pal. N. Y.   | 6           | 24    | 11    | 25, 26      |
|               |           |                    |                            |              |             |       | 23    | 17, enl.    |
| “             | “         | “                  | “ .....Hall.               | St. G. N. Y. | 2           | ....  | 11    | 27          |
|               |           |                    | H. & S.                    | Pal. N. Y.   | 6           | 24    | 11    | 27          |
| “             | “         | “                  | “ “                        | “ “          | 6           | 24    | 23    | 16, enl.    |
| “             | “         | “                  | “ “                        | “ “          | 6           | 24    | 23    | 18, “       |
| “             | “         | “                  | “ “                        | “ “          | 6           | 24    | 23    | 19, “       |
| “             | 2310      | Type.              | “ var. signata.Hall.       | N. Y. S. M.  | 26          | 104   | ....  | .....       |
|               |           |                    | “                          | “ “          | 32          | 153   | ....  | .....       |
|               |           |                    | “                          | St. G. N. Y. | 2           | ....  | 11    | 30, 31      |
|               |           |                    | H. & S.                    | Pal. N. Y.   | 6           | 25    | 11    | 30, 31      |
| “             | 2312      | “                  | unispina.....Hall.         | N. Y. S. M.  | 26          | 102   | ....  | .....       |
|               |           |                    | “                          | St. G. N. Y. | 2           | ....  | 11    | 35-37       |
|               |           |                    | H. & S.                    | Pal. N. Y.   | 6           | 26    | 11    | 35-37       |
| Niag.         | 1912      | “                  | <b>Ceramopora</b> Hall.    |              |             |       |       |             |
|               |           |                    | agellus.....Hall.          | N. Y. S. M.  | 28          | 120   | 8     | 6, enl. × 4 |
| “             | 1911      | “                  | confluens... ..Hall.       | “ “          | 28          | 119   | 8     | 4, 5        |



Class POLYZOA.

| LOCALITY.              | REMARKS.                                                                                                                                     |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Lockport, N. Y.        | Four fragments.                                                                                                                              |
| Clarksville, N. Y.     | An irregular branch, imbedded.                                                                                                               |
| .....                  | As type of <i>C. fistulosa</i> Hall.                                                                                                         |
| .....                  | “ “ “ “                                                                                                                                      |
| Clarksville, N. Y.     | Three fragments imbedded in two blocks.                                                                                                      |
| Lockport, N. Y.        | Large, branching individual, imbedded.                                                                                                       |
| “ “                    | Five fragments.                                                                                                                              |
| .....                  | As <i>Alveolites exsul</i> .                                                                                                                 |
| Waldron, Ind.          | A fragment imbedded with type of <i>Trematopora osculum</i> , figs. 13, 14 of pl. 10.                                                        |
| .....                  | See <i>C. cellulosa</i> .                                                                                                                    |
| Lockport, N. Y.        | Three small masses.                                                                                                                          |
| “ “                    | Two small, irregular fragments.                                                                                                              |
| .....                  | See <i>Callotrypa macropora</i> .                                                                                                            |
| .....                  | “ “ “ “ var. <i>signata</i> .                                                                                                                |
| .....                  | “ “ “ “ <i>maculosa</i> .                                                                                                                    |
| Lockport, N. Y.        | Small, lenticular mass.                                                                                                                      |
| .....                  | See <i>Cælocaulis mediopora</i> .                                                                                                            |
| Clarksville, N. Y.     | Short fragment imbedded with type of <i>Trematopora ? corticosa</i> , figs. 1-3, pl. 10.                                                     |
| Waldron, Ind.          | Branching fragment, imbedded.                                                                                                                |
| .....                  | See <i>Callotrypa unispina</i> .                                                                                                             |
| .....                  | “ <i>Cælocaulis venusta</i> .                                                                                                                |
| Lockport, N. Y.        | Branching stem imb. w. type of <i>Homocrinus parvus</i> , fig. 1b, pl. 41.                                                                   |
| .....                  | Defined as a subgenus of <i>Callopora</i> .                                                                                                  |
| .....                  | As <i>Callopora macropora</i> .                                                                                                              |
| .....                  | “ “ “ “                                                                                                                                      |
| Nr. Clarksville, N. Y. | Imbedded with <i>C. macropora</i> var. <i>signata</i> , figs. 30, 31, pl. 11 and <i>Ptilodictya tenuis</i> , fig. 15, pl. 23A.               |
| .....                  | As <i>Callopora macropora</i> .                                                                                                              |
| Nr. Clarksville, N. Y. | Long branching fragment imbedded with other types. Formation and locality incorrect in explanation of plate.                                 |
| “ “ “                  | Short fragment showing cells without elevated margins, imbedded.                                                                             |
| “ “ “                  | Small fragment imbedded with other types.                                                                                                    |
| “ “ “                  | Imbedded with type of <i>Fenestella æsyle</i> , fig. 13, pl. 19.                                                                             |
| .....                  | As type of <i>Trematopora signata</i> Hall.                                                                                                  |
| .....                  | “ <i>Callopora macropora</i> , var. <i>signata</i> .                                                                                         |
| .....                  | “ “ “ “                                                                                                                                      |
| Nr. Clarksville, N. Y. | A small branching colony imbedded in block with <i>C. macropora</i> , figs. 25, 26, pl. 11 and <i>Ptilodictya tenuis</i> , fig. 15, pl. 23A. |
| .....                  | As <i>Callopora unispina</i> .                                                                                                               |
| .....                  | “ “ “ “                                                                                                                                      |
| Clarksville, N. Y.     | A detached, branching colony.                                                                                                                |
| Waldron, Ind.          | Small colony on a <i>Platystoma</i> with <i>C. labecula</i> and <i>Paleschara maculata</i> , figs. 3 and 11-13, pl. 8.                       |
| “ “                    | On a <i>Platystoma niagarens</i> .                                                                                                           |

MOLLUSCOIDEA—Continued.

| Geol. Subdiv. | Cat. No.                 | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.           | REFERENCE.   |       |       |       |                    |
|---------------|--------------------------|--------------------|--------------------------------------|--------------|-------|-------|-------|--------------------|
|               |                          |                    |                                      | Work.        | Vol.  | P.    | Pl.   | Figs.              |
|               |                          |                    | <b>Ceramopora</b> Hall— <i>Cont.</i> |              |       |       |       |                    |
|               |                          |                    | <i>foliacea</i> .....                | .....        | ..... | ..... | ..... | .....              |
| Niag.         | 1737                     | Gen. and Sp. Type. | <i>imbricata</i> .....Hall.          | Pal. N. Y.   | 2     | 169   | 40E   | 1a-f               |
| "             | "                        | "                  | " .....                              | " "          | 2     | 169   | 40E   | 1h, i              |
| "             | 1968                     | Type.              | <i>labecula</i> .....Hall.           | N. Y. S. M.  | 28    | 119   | 8     | 1, <i>enl.</i> × 6 |
| "             | "                        | "                  | " .....                              | " "          | 28    | 119   | 8     | 2, " "             |
| "             | "                        | "                  | " .....                              | " "          | 28    | 119   | 8     | 3, " "             |
|               |                          |                    | ( <b>Berenicea</b> ).                |              |       |       |       |                    |
| L. H.         | 2322                     | "                  | <i>maxima</i> .....Hall.             | " "          | 26    | 109   |       |                    |
|               |                          |                    | " .....                              | St. G. N. Y. | 2     | ....  | 16    | 12                 |
|               |                          |                    | H. & S.                              | Pal. N. Y.   | 6     | 34    | 16    | 12                 |
|               |                          |                    | <b>Clathropora</b> Hall.             |              |       |       |       |                    |
| Niag.         | 1735                     | Gen. and Sp. Type. | <i>alcicornis</i> .....Hall.         | Pal. N. Y.   | 2     | 159   | 40B   | 4a-c               |
| "             | 1734                     | Type.              | <i>frondosa</i> .....Hall.           | " "          | 2     | 160   | 40B   | 5a-e               |
|               |                          |                    | <b>Cœlocaulis</b> Hall.              |              |       |       |       |                    |
| L. H.         | 2311                     | "                  | <i>mediopora</i> .....Hall.          | N. Y. S. M.  | 32    | 157   |       |                    |
|               |                          |                    | " .....                              | St. G. N. Y. | 2     | ....  | 14    | 18, <i>enl.</i>    |
|               |                          |                    | H. & S.                              | Pal. N. Y.   | 6     | 23    | 14    | 18, "              |
|               |                          |                    |                                      |              |       |       | 23A   | 11, 12             |
| "             | 2313                     | Gen. and Sp. Type. | <i>venusta</i> .....Hall.            | N. Y. S. M.  | 26    | 101   |       |                    |
|               |                          |                    | H. & S.                              | Pal. N. Y.   | 6     | 23    | 23A   | 15, <i>enl.</i>    |
|               |                          |                    | <b>Diamesopora</b> Hall.             |              |       |       |       |                    |
| Niag.         | 1760                     | Gen. and Sp. Type. | <i>dichotoma</i> .....Hall.          | " "          | 2     | 158   | 40B   | 3a-d               |
|               |                          |                    | <b>Escharopora</b> Hall.             |              |       |       |       |                    |
|               |                          |                    | <i>lirata</i> .....                  | .....        | ..... | ..... | ..... | .....              |
|               |                          |                    | <i>tenuis</i> .....                  | .....        | ..... | ..... | ..... | .....              |
|               |                          |                    | <b>Fenestella</b> Lonsdale.          |              |       |       |       |                    |
| "             | 1908                     | Type.              | <i>acmea</i> .....Hall.              | N. Y. S. M.  | 28    | 124   | 12    | 10-13              |
| "             | "                        | "                  | " .....                              | " "          | 28    | 124   | 12    | 14, <i>enl.</i>    |
| L. H.         | <u>2323</u> <sub>1</sub> | "                  | <i>æsyle</i> .....Hall.              | " "          | 32    | 166   |       |                    |
|               |                          |                    | " .....                              | St. G. N. Y. | 2     | ....  | 19    | 11, 12             |
|               |                          |                    | H. & S.                              | Pal. N. Y.   | 6     | 46    | 19    | 11, 12             |
| "             | <u>2323</u> <sub>2</sub> | "                  | " .....                              | St. G. N. Y. | 2     | ....  | 19    | 13, <i>enl.</i>    |
|               |                          |                    | H. & S.                              | Pal. N. Y.   | 6     | 46    | 19    | 13, "              |
|               |                          |                    | <i>ambigua</i> .....                 | .....        | ..... | ..... | ..... | .....              |
|               |                          |                    | <i>compacta</i> .....                | .....        | ..... | ..... | ..... | .....              |
| L. H.         | 2324                     | Type.              | <i>crebripora</i> .....Hall.         | N. Y. S. M.  | 26    | 95    |       |                    |
|               |                          |                    | " .....                              | St. G. N. Y. | 2     | ....  | 20    | 1, 3               |
|               |                          |                    | H. & S.                              | Pal. N. Y.   | 6     | 43    | 20    | 1, 3               |
| Niag.         | 1730                     | "                  | <i>cribrosa</i> .....Hall.           | " "          | 2     | 166   | 40D   | 3a, b              |
| "             | 1729                     | "                  | <i>elegans</i> .....Hall.            | " "          | 2     | 164   | 40D   | 1a-c               |
| "             | "                        | "                  | " .....                              | " "          | 2     | 164   | 40D   | 1f, g              |
| L. H.         | <u>2326</u> <sub>1</sub> | "                  | <i>idalia</i> .....Hall.             | N. Y. S. M.  | 26    | 95    |       |                    |
|               |                          |                    | " .....                              | St. G. N. Y. | 2     | ....  | 21    | 9, <i>enl.</i>     |
|               |                          |                    | H. & S.                              | Pal. N. Y.   | 6     | 52    | 21    | 9, "               |
|               |                          |                    | <i>idothea</i> .....                 | .....        | ..... | ..... | ..... | .....              |
|               |                          |                    | <i>nervia</i> .....                  | .....        | ..... | ..... | ..... | .....              |
| Niag.         | 1906                     | Type.              | <i>parvulipora</i> .....Hall.        | N. Y. S. M.  | 28    | 123   | 12    | 1, 2               |
| "             | "                        | "                  | " .....                              | " "          | 28    | 123   | 12    | 3-6                |
| "             | "                        | "                  | " .....                              | " "          | 28    | 123   | 12    | 7-9                |



Class POLYZOA—Continued.

| LOCALITY.              | REMARKS.                                                                                                                             |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| .....                  | See <i>Lichenalia concentrica</i> .                                                                                                  |
| Lockport, N. Y.        | Two disc-shaped individuals.                                                                                                         |
| “ “                    | Large compressed individual, weathered, imbedded.                                                                                    |
| Waldron, Ind.          | On a type of <i>Fenestella parvulipora</i> , fig. 1, pl. 12.                                                                         |
| “ “                    | Two colonies on <i>F. parvulipora</i> , fig. 3, pl. 12.                                                                              |
| “ “                    | A young colony on a <i>Platystoma</i> with <i>Ceramopora agellus</i> and <i>Paleschara maculata</i> , figs. 6 and 11-13, pl. 8.      |
| Nr. Clarksville, N. Y. | Rather large. Imbedded with <i>Fenestella idalia</i> , fig. 9, pl. 21.                                                               |
| Lockport, N. Y.        | Branching frond, imbedded.                                                                                                           |
| “ “                    | A large frond and a small fragment ; each imbedded.                                                                                  |
| .....                  | Defined as a subgenus of <i>Callopora</i> .                                                                                          |
| .....                  | As a type of <i>Callopora parasitica</i> .                                                                                           |
| .....                  | “ “ “ “                                                                                                                              |
| Clarksville, N. Y.     | Two fragments imbedded with types of other species.                                                                                  |
| .....                  | As <i>Callopora venusta</i> .                                                                                                        |
| Clarksville, N. Y.     | Small fragment imbedded with types of other species.                                                                                 |
| Lockport, N. Y.        | Two branching stems, one showing longitudinal section.                                                                               |
| .....                  | Synonym of <i>Ptilodictya</i> .                                                                                                      |
| .....                  | See <i>Ptilodictya lirata</i> and <i>Rhinidictya? granulosa</i> .                                                                    |
| .....                  | See <i>Ptilodictya tenuis</i> .                                                                                                      |
| Waldron, Ind.          | Two fragments showing poriferous side, imbedded,                                                                                     |
| “ “                    | Small, very perfect fragment imbedded with types of other species.                                                                   |
| New Salem, N. Y.       | Shows non-poriferous side ; only a part of frond was figured.                                                                        |
| Clarksville, N. Y.     | Frond imbedded with type of <i>Callopora macropora</i> , fig. 19, pl. 23.                                                            |
| .....                  | See <i>Loculipora ambigua</i> .                                                                                                      |
| .....                  | “ <i>Polypora compacta</i> .                                                                                                         |
| Clarksville, N. Y.     | Imbedded with types of other species.                                                                                                |
| Lockport, N. Y.        | Fragment in block with types of other species.                                                                                       |
| “ “                    | “ “ “ “ “ “                                                                                                                          |
| “ “                    | Fragment imbedded with many others.                                                                                                  |
| Nr. Clarksville, N. Y. | Shows non-poriferous side ; imbedded with type of <i>Ceramopora maxima</i> , fig. 12, pl. 16.                                        |
| .....                  | See <i>Polypora idothea</i> .                                                                                                        |
| .....                  | “ “ <i>compacta</i> .                                                                                                                |
| Waldron, Ind.          | Bears type of <i>Ceramopora labecula</i> , fig. 1, pl. 8.                                                                            |
| “ “                    | Very well preserved. Bears type of <i>Lichenalia concentrica</i> , figs. 4, 5, pl. 7 and <i>Ceramopora labecula</i> , fig. 2, pl. 8. |
| “ “                    | A large fragment and a large cup-shaped frond.                                                                                       |

MOLLUSCOIDEA—Continued.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.             | REFERENCE.   |        |       |        |                     |
|---------------|----------|-------------------|----------------------------------------|--------------|--------|-------|--------|---------------------|
|               |          |                   |                                        | Work.        | Vol.   | P.    | Pl.    | Figs.               |
|               |          |                   | <b>Fenestella</b> Lonsd.— <i>Cont.</i> |              |        |       |        |                     |
|               |          |                   | <i>præcursor</i> .....                 | .....        | .....  | ..... | .....  | .....               |
| Cl.           | 1489     | Fig'd.            | <i>prisca</i> (Lonsd.)?...Hall.        | Pal. N. Y.   | 2      | 50    | 19     | 4a, b               |
| "             | 1489     | "                 | " " " " " "                            | " "          | 2      | 50    | 19     | 4c-e                |
| Niag.         | 1909     | Type.             | <i>punctostriata</i> .....Hall.        | N. Y. S. M.  | 28     | 125   | 12     | 15, 16              |
| L. H.         | 2327     | "                 | <i>sylvia</i> .....Hall.               | " "          | 26     | 96    |        |                     |
|               | 1        |                   | " " " " " "                            | St. G. N. Y. | 2      | ....  | 20     | 4-6                 |
|               |          |                   | " " " " " " H. & S.                    | Pal. N. Y.   | 6      | 49    | 20     | 4-6                 |
| "             | "        | "                 | " " " " " " Hall.                      | St. G. N. Y. | 2      | ....  | 20     | 7, <i>enl.</i>      |
|               |          |                   | " " " " " " H. & S.                    | Pal. N. Y.   | 6      | 49    | 20     | 7, "                |
| Niag.         | 1728     | "                 | <i>tenuiceps</i> .....Hall.            | " "          | 2      | 165   | 40D    | 2a-c                |
| "             | "        | "                 | " " " " " "                            | " "          | 2      | 165   | 40D    | 2d, e               |
| "             | "        | "                 | " " " " " "                            | " "          | 2      | 165   | 40D    | 2f, g               |
| Cl.           | 1488     | "                 | <i>tenuis</i> .....Hall.               | " "          | 2      | 51    | 19     | 5a                  |
|               | 1        |                   | sp.....                                | " "          | 2      | 166   | 40D    | 4                   |
|               |          |                   | <b>Helopora</b> Hall.                  |              |        |       |        |                     |
| "             | 1505     | Gen. and          | <i>fragilis</i> .....Hall.             | " "          | 2      | 44    | 18     | 3a                  |
| "             | 1505     | Sp. Type.         | " " " " " "                            | " "          | 2      | 44    | 18     | 3b, d               |
| "             | 1        | "                 | " " " " " "                            | " "          | 2      | 44    | 18     | 3c                  |
|               |          |                   | <b>Hemitrypa</b> Phillips.             |              |        |       |        |                     |
|               |          |                   | <i>dubia</i> .....                     | .....        | .....  | ..... | .....  | .....               |
|               |          |                   | <i>nervia</i> .....                    | .....        | .....  | ..... | .....  | .....               |
|               |          |                   | <b>Hornera</b> Lamouroux.              |              |        |       |        |                     |
|               |          |                   | <i>dichotoma</i> .....                 | .....        | .....  | ..... | .....  | .....               |
|               |          |                   | <b>Ichthyorhachis</b> McCoy.           |              |        |       |        |                     |
| L. H.         | 2336     | Type.             | <i>nereis</i> .....Hall.               | N. Y. S. M.  | 26     | 98    |        |                     |
|               |          |                   | " " " " " "                            | St. G. N. Y. | 2      | ....  | 22     | 19-21               |
|               |          |                   | " " " " " " H. & S.                    | Pal. N. Y.   | 6      | 66    | 22     | 19-21               |
|               |          |                   | <b>Lichenalia</b> Hall.                |              |        |       |        |                     |
| Niag.         | 1487     | Gen. and          | <i>concentrica</i> .....Hall.          | " "          | 2      | 171   | 37A    | 2a, b               |
| "             | 1487     | Sp. Type.         | " " " " " "                            | " "          | 2      | 171   | 40E    | 5a, b               |
| "             | 1        | "                 | " " " " " "                            | " "          | 2      | 171   | 40E    | 5c, g               |
| "             | 1487     | "                 | " " " " " "                            | " "          | 2      | 171   | 40E    | 5c, g               |
| "             | 1487     | Type.             | " " " " " "                            | N. Y. S. M.  | 28     | 116   | 5      | 9, 13               |
|               | 3        |                   | " " " " " "                            | " "          | 28     | 116   | 5      | 10, 11              |
| "             | "        | "                 | " " " " " "                            | " "          | 28     | 116   | 5      | 12, 14              |
| "             | "        | "                 | " " " " " "                            | " "          | 28     | 116   | 5      | 15, 17              |
|               |          |                   | " " " " " "                            | " "          | 28     | 116   | 5      | 16                  |
| "             | "        | "                 | " " " " " "                            | " "          | 28     | 116   | 6      | 1, 2                |
| "             | "        | "                 | " " " " " "                            | " "          | 28     | 116   | 6      | 4                   |
| "             | "        | "                 | " " " " " "                            | " "          | 28     | 116   | 6      | 7                   |
| "             | "        | "                 | " " " " " "                            | " "          | 28     | 116   | 6      | 8, 10               |
| "             | "        | "                 | " " " " " "                            | " "          | 28     | 116   | 7      | 10, <i>enl.</i>     |
|               |          |                   | " " " " " "                            | " "          | 28     | 116   | 6      | 9                   |
| "             | "        | "                 | " " " " " "                            | " "          | 28     | 116   | 7      | 9, <i>enl.</i>      |
| "             | "        | "                 | " " " " " "                            | " "          | 28     | 116   | 7      | 3, "                |
| "             | "        | "                 | " " " " " "                            | " "          | 28     | 116   | 7      | 4, 5                |
| "             | "        | "                 | " " " " " "                            | " "          | 28     | 116   | 7      | 6, <i>enl.</i>      |
| "             | "        | "                 | " " " " " "                            | " "          | 28     | 116   | 7      | 8, "                |
| "             | "        | "                 | " " " " " "                            | " "          | 28     | 116   | 7      | 11, <i>enl.</i> × 3 |
| "             | 1487     | Fig'd.            | " " " " " "                            | Geol. N. Y.  | 4th D. | 109   | ct. 38 | 3                   |
| "             | 1487     | "                 | " " " " " "                            | Pal. N. Y.   | 2      | 170   | 40E    | 3a-c                |
|               | 2        |                   |                                        |              |        |       |        |                     |



Class POLYZOA—Continued.

| LOCALITY.                                                       | REMARKS.                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....<br>Flamboro' Hd., Ont.<br>Wolcott, N. Y.<br>Waldron, Ind. | See <i>Unitrypa præcursor</i> .<br>Base of cup-shaped frond, imbedded.<br>Two specimens which were referred to these figs. by Prof. Hall.<br>Small fragment showing non-poriferous side.                                                 |
| Nr. Clarksville, N. Y.                                          | Large frond showing non-poriferous side.                                                                                                                                                                                                 |
| “ “ “<br>Lockport, N. Y.                                        | Part of a frond showing poriferous side.<br>Large, cyathiform individual, crushed, imbedded.                                                                                                                                             |
| “ “ “<br>Wayne Co., N. Y.                                       | Small fragment broken off near base.<br>Imbedded with a type of <i>Polypora incepta</i> , fig. 2f, same plate.<br>Somewhat weathered fragment, imbedded. It is doubtful whether<br>the enlargements were made from this specimen or not. |
| .....                                                           | See <i>Thamniscus niagarensis</i> .                                                                                                                                                                                                      |
| Wayne Co., N. Y.                                                | Small fragment, imbedded. From “ Hill's Mill.”                                                                                                                                                                                           |
| Flamboro' Hd., Ont.<br>“ “ “                                    | Branch imbedded with type of <i>Stictopora raripora</i> , fig. 5b, pl. 18.<br>Imbedded.                                                                                                                                                  |
| .....                                                           | See <i>Loculipora ambigua</i> .                                                                                                                                                                                                          |
| .....                                                           | “ <i>Polypora compacta</i> .                                                                                                                                                                                                             |
| .....                                                           | See <i>Stictopora dichotoma</i> .                                                                                                                                                                                                        |
| Near Schoharie, N. Y.                                           | Two fragments imbedded in same block.                                                                                                                                                                                                    |
| Lockport, N. Y.                                                 | A large, nearly perfect frond, imbedded.                                                                                                                                                                                                 |
| Rochester, N. Y.                                                | Two fronds, imbedded.                                                                                                                                                                                                                    |
| Lockport, N. Y.                                                 | Considerable fragment of a very large frond, imbedded.                                                                                                                                                                                   |
| Waldron, Ind.                                                   | Small fragment, imbedded with types of <i>Trematopora osculum</i> ,<br>figs. 11, 12, pl. 10, and <i>T. echinata</i> , fig. 4, pl. 11.                                                                                                    |
| “ “                                                             | Inrolled specimen ; broken across to show structure.                                                                                                                                                                                     |
| “ “                                                             | Large, irregular frond, imbedded.                                                                                                                                                                                                        |
| “ “                                                             | Small fragment on a <i>Strophostylus</i> with <i>L. concentrica</i> , var. <i>parvula</i> ,<br>pl. 7, figs. 1, 2.                                                                                                                        |
| “ “                                                             | Four very small colonies on a <i>Strophostylus</i> .                                                                                                                                                                                     |
| “ “                                                             | Small ; shows both surfaces.                                                                                                                                                                                                             |
| “ “                                                             | Large, well preserved colony, imbedded.                                                                                                                                                                                                  |
| “ “                                                             | Two young colonies on a <i>Fenestella</i> , imbedded with other types.                                                                                                                                                                   |
| “ “                                                             | Two colonies imbedded in the same block.                                                                                                                                                                                                 |
| “ “                                                             | Rather small, symmetrical colony, imbedded.                                                                                                                                                                                              |
| “ “                                                             | A young colony on an <i>Atrypa</i> , imbedded.                                                                                                                                                                                           |
| “ “                                                             | Young colonies on <i>Fenestella parvulipora</i> , fig. 3, pl. 12.                                                                                                                                                                        |
| “ “                                                             | Two young colonies on a <i>Strophostylus</i> .                                                                                                                                                                                           |
| “ “                                                             | Small fragment imbedded so as to show cellules.                                                                                                                                                                                          |
| “ “                                                             | Shows cross section.                                                                                                                                                                                                                     |
| Rochester, N. Y.                                                | As type of <i>Orbicula corrugata</i> Hall. Imbedded.                                                                                                                                                                                     |
| Lockport, N. Y.                                                 | “ “ <i>Ceramopora foliacea</i> Hall. “                                                                                                                                                                                                   |

MOLLUSCOIDEA—Continued.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                          | REFERENCE.   |             |      |      |                 |
|---------------|----------|--------------------|-----------------------------------------------------|--------------|-------------|------|------|-----------------|
|               |          |                    |                                                     | Work.        | Vol.        | P.   | Pl.  | Figs.           |
| Niag.         | 1487     | Type.              | <b>Lichenalia</b> Hall— <i>Cont.</i>                |              |             |      |      |                 |
| "             | "        | "                  | <i>concentrica</i> , <i>var.</i> <i>maculata</i> H. | N. Y. S. M.  | 28          | 117  | 6    | 3, 5, 6         |
| "             | "        | "                  | " " <i>parvula</i> H.                               | " "          | 28          | 117  | 7    | 1, 2            |
| L. H.         | 2342     | "                  | <i>maculosa</i> .....Hall.                          | " "          | 26          | 106  | .... | ....            |
|               | 1        |                    | "                                                   | " "          | 32          | 156  | .... | ....            |
|               |          |                    | "                                                   | St. G. N. Y. | 2           | .... | 14   | 2               |
|               |          |                    | H. & S.                                             | Pal. N. Y.   | 6           | 30   | 14   | 2               |
|               |          |                    | <b>Loculipora</b> Hall.                             |              |             |      |      |                 |
| Niag.         | 1907     | "                  | <i>ambigua</i> .....Hall.                           | N. Y. S. M.  | 28, 2d ed.  | 123  | 11   | 17-21           |
|               |          |                    | "                                                   | " "          | 28, 1st ed. | .... | 11   | 17-21           |
|               |          |                    | <b>Orthopora</b> Hall.                              |              |             |      |      |                 |
| L. H.         | 2317     | "                  | <i>parallela</i> .....Hall.                         | N. Y. S. M.  | 32          | 152  | .... | ....            |
|               |          |                    | "                                                   | St. G. N. Y. | 2           | .... | 11   | 13, 14          |
|               |          |                    | H. & S.                                             | Pal. N. Y.   | 6           | 19   | 11   | 13, 14          |
| "             | 2318     | Gen. and Sp. Type. | <i>regularis</i> .....Hall.                         | N. Y. S. M.  | 26          | 106  | .... | ....            |
|               |          |                    | "                                                   | St. G. N. Y. | 2           | .... | 11   | 1               |
|               |          |                    | H. & S.                                             | Pal. N. Y.   | 6           | 16   | 11   | 1               |
|               |          |                    | <b>Paleschara</b> Hall.                             |              |             |      |      |                 |
|               |          |                    | <i>aspera</i> .....                                 | ....         | ....        | .... | .... | ....            |
|               |          |                    | <i>bifoliata</i> .....                              | ....         | ....        | .... | .... | ....            |
|               |          |                    | <i>foliata</i> .....                                | ....         | ....        | .... | .... | ....            |
| Niag.         | 1913     | Type.              | <i>maculata</i> .....Hall.                          | N. Y. S. M.  | 28          | 121  | 8    | 9, 10           |
| "             | "        | "                  | " " " " " "                                         | " "          | 28, 1st ed. | .... | 8    | 11-13           |
|               |          |                    | "                                                   | " "          | 28, 2d ed.  | 121  | 8    | 11-13           |
| "             | 1918     | "                  | <i>offula</i> .....Hall.                            | " "          | 28          | 120  | 8    | 7, 8            |
| "             | 1914     | "                  | ? <i>sphaerion</i> .....Hall.                       | " "          | 28          | 121  | 8    | 14, 15          |
|               |          |                    | <b>Phænopora</b> Hall.                              |              |             |      |      |                 |
| Cl.           | 1495     | "                  | <i>constellata</i> .....Hall.                       | Pal. N. Y.   | 2           | 47   | 18   | 7b, e           |
| "             | "        | "                  | " " " " " "                                         | " "          | 2           | 47   | 18   | 7c, d           |
|               |          |                    | <i>ensiformis</i> .....                             | ....         | ....        | .... | .... | ....            |
| Cl.           | 1490     | Gen. and Sp. Type. | <i>explanata</i> .....Hall.                         | Pal. N. Y.   | 2           | 46   | 18   | 6a, e           |
| "             | "        | "                  | " " " " " "                                         | " "          | 2           | 46   | 18   | 6d, <i>n.s.</i> |
|               |          |                    | <b>Polypora</b> McCoy.                              |              |             |      |      |                 |
| L. H.         | 2328     | Type.              | <i>compacta</i> .....Hall.                          | N. Y. S. M.  | 32          | 163  | .... | ....            |
|               |          |                    | "                                                   | St. G. N. Y. | 2           | .... | 18   | 1, 2            |
|               |          |                    | H. & S.                                             | Pal. N. Y.   | 6           | 63   | 18   | 1, 2            |
| "             | "        | "                  | " " " " " "                                         | N. Y. S. M.  | 26          | 93   | .... | ....            |
|               |          |                    | "                                                   | St. G. N. Y. | 2           | .... | 22   | 5               |
|               |          |                    | H. & S.                                             | Pal. N. Y.   | 6           | 63   | 22   | 5               |
|               |          |                    | <i>compacta</i> .....                               | " "          | 6           | .... | 22   | 4               |
|               |          |                    | <i>elegans</i> .....                                | ....         | ....        | .... | .... | ....            |
| L. H.         | 2329     | Type.              | <i>idothea</i> .....Hall.                           | N. Y. S. M.  | 32          | 166  | .... | ....            |
|               |          |                    | "                                                   | " "          | 26          | 97   | .... | ....            |
|               |          |                    | "                                                   | St. G. N. Y. | 2           | .... | 19   | 14, 15          |
|               |          |                    | H. & S.                                             | Pal. N. Y.   | 6           | 60   | 19   | 14, 15          |
| Niag.         | 1731     | "                  | <i>incepta</i> .....Hall.                           | " "          | 2           | 167  | 40D  | 2f              |
| "             | "        | "                  | " " " " " "                                         | " "          | 2           | 167  | 40D  | 5a, b           |
| "             | "        | "                  | " " " " " "                                         | " "          | 2           | 167  | 40D  | 5c-f            |



## Class POLYZOA—Continued.

| LOCALITY.               | REMARKS.                                                                                |
|-------------------------|-----------------------------------------------------------------------------------------|
| Waldron, Ind.           | A colony of medium size and a small irregular fragment.                                 |
| " "                     | On a <i>Strophostylus</i> with <i>L. concentrica</i> , figs. 15, 17, pl. 5.             |
| .....                   | As <i>Trematopora maculosa</i> .                                                        |
| .....                   | " <i>Callopora maculosa</i> .                                                           |
| .....                   | " " "                                                                                   |
| Catskill Creek, N. Y.   | A weathered colony, conical in form.                                                    |
| .....                   | As <i>Fenestella ambigua</i> .                                                          |
| Waldron, Ind.           | As a type of <i>Hemitrypa dubia</i> Hall. Two fragments, imbedded.                      |
| .....                   | Defined as a subgenus of <i>Trematopora</i> .                                           |
| .....                   | As <i>Trematopora parallela</i> .                                                       |
| .....                   | " " (?) "                                                                               |
| Clarksville, N. Y.      | A short branch, imbedded.                                                               |
| .....                   | As <i>Trematopora regularis</i> .                                                       |
| .....                   | " " "                                                                                   |
| Clarksville, N. Y.      | A group of branches, imbedded.                                                          |
| .....                   | See <i>Paleschara maculata</i> .                                                        |
| .....                   | " <i>Ptilodictya nebulosa</i> .                                                         |
| .....                   | " " "                                                                                   |
| Waldron, Ind.           | Encrusts a cylindrical foreign body.                                                    |
| .....                   | As a type of <i>Paleschara</i> (?) <i>aspera</i> Hall.                                  |
| Waldron, Ind.           | Encrusting a <i>Platystoma</i> which also bears <i>Ceramopora labecula</i> and          |
| " "                     | <i>C. agellus</i> , figs. 3 and 6, pl. 8.                                               |
| " "                     | Small fragment imbedded with types of other species.                                    |
| " "                     | As <i>Paleschara</i> ? ( <i>Chætetes</i> ?) <i>sphæron</i> in the second edition of the |
|                         | report. A small, spherical colony.                                                      |
| Wayne Co., N. Y.        | Exterior imprint in iron ore (hematite). Partly figured.                                |
| " "                     | Ext. impr. of large stipe. Lettered incorrectly in expl. of plate.                      |
| .....                   | See <i>Ptilodictya ensiformis</i> .                                                     |
| Flamboro' Hd., Ont.     | A small fragment, imbedded.                                                             |
| " "                     | Imbedded with types of <i>Subretepora angulata</i> , figs. 3e-h, pl. 19.                |
| .....                   | As <i>Fenestella compacta</i> .                                                         |
| .....                   | " " "                                                                                   |
| Near Clarksville, N. Y. | Shows non-porif. side. Imb. w. <i>Unitrypa præcursor</i> , fig. 17, pl. 21.             |
| .....                   | As a type of <i>Fenestella nervia</i> .                                                 |
| .....                   | " <i>Fenestella</i> ( <i>Hemitrypa</i> ) <i>nervia</i> ?                                |
| Near Clarksville, N. Y. | Shows non-porif. side. Fig. 4 of this pl. was made from same speci-                     |
| .....                   | men as fig. 14, pl. 21, which is referred to <i>F. (Unitrypa) præcursor</i> .           |
| .....                   | See <i>Unitrypa præcursor</i> .                                                         |
| .....                   | " <i>Polypora idothea</i> .                                                             |
| .....                   | As <i>Fenestella idothea</i> .                                                          |
| .....                   | " <i>Polypora elegans</i> ?                                                             |
| .....                   | " <i>Fenestella idothea</i> .                                                           |
| Near Clarksville, N. Y. | Shows celluliferous face.                                                               |
| Lockport, N. Y.         | Fragment imbedded with <i>Fenestella tenuiceps</i> , figs. 2f-g, pl. 40D.               |
| " "                     | Shows non-poriferous surface.                                                           |
| " "                     | Cup-shaped frond showing both surfaces.                                                 |

MOLLUSCOIDEA—Continued.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.          | REFERENCE.   |       |       |       |          |
|---------------|----------|--------------------|-------------------------------------|--------------|-------|-------|-------|----------|
|               |          |                    |                                     | Work.        | Vol.  | P.    | Pl.   | Figs.    |
| L. H.         | 2330     | Type.              | <b>Polypora</b> McCoy— <i>Cont.</i> |              |       |       |       |          |
|               |          |                    | lilæa .....Hall.                    | N. Y. S. M.  | 26    | 96    | ....  | .....    |
|               |          |                    | “ “                                 | “ “          | 32    | 165   | ....  | .....    |
|               |          |                    | “ “                                 | St. G. N. Y. | 2     | ....  | 18    | 19, 20   |
|               |          |                    | H. & S. Pal. N. Y.                  | 6            | 62    | 18    |       | 19, 20   |
| Cl.           | 1498     | “                  | <b>Ptilodictya</b> Lonsdale.        |              |       |       |       |          |
|               |          |                    | ensiformis .....Hall.               | Pal. N. Y.   | 2     | 48    | 18    | 8a-c     |
| L. H.         | 2339     | “                  | lirata .....Hall.                   | N. Y. S. M.  | 26    | 100   | ....  | .....    |
|               |          |                    | “ “                                 | St. G. N. Y. | 2     | ....  | 17    | 1, 2     |
| “             | 2340     | “                  | H. & S. Pal. N. Y.                  | 6            | 38    | 17    |       | 1, 2     |
|               |          |                    | nebulosa .....Hall.                 | N. Y. S. M.  | 26    | 107   | ....  | .....    |
| “             | 1        | “                  | “ “                                 | “ “          | 32    | 162   | ....  | .....    |
|               |          |                    | “ “                                 | St. G. N. Y. | 2     | ....  | 17    | 17, n.s. |
| L. H.         | 2341     | “                  | H. & S. Pal. N. Y.                  | 6            | 40    | 17    |       | 17, n.s. |
|               |          |                    | tenuis .....Hall.                   | N. Y. S. M.  | 26    | 99    | ....  | .....    |
| “             | “        | “                  | “ “                                 | St. G. N. Y. | 2     | ....  | 17    | 12, enl. |
|               |          |                    | H. & S. Pal. N. Y.                  | 6            | 39    | 17    |       | 12, enl. |
| “             | “        | “                  | “ .....Hall.                        | “ “          | 6     | 39    | 23A   | 15, enl. |
|               |          |                    |                                     |              |       |       |       |          |
| L. H.         | 2338     | Type.              | <b>Retepora</b> Lamarck.            |              |       |       |       |          |
|               |          |                    | angulata .....                      | .....        | ..... | ..... | ..... | .....    |
|               |          |                    | asperato-striata .....              | .....        | ..... | ..... | ..... | .....    |
|               |          |                    | diffusa.....                        | .....        | ..... | ..... | ..... | .....    |
| L. H.         | 2338     | Type.              | <b>Rhinidictya</b> Ulrich.          |              |       |       |       |          |
|               |          |                    | ? granulosa.....H. & S.             | Pal. N. Y.   | 6     | 40    | 17    | 5, 6     |
|               |          |                    | Hall.                               | St. G. N. Y. | 2     | ....  | 17    | 5, 6     |
| Niag.         | 1739     | “                  | <b>Rhinopora</b> Hall.              |              |       |       |       |          |
|               |          |                    | tuberculosa.....Hall.               | Pal. N. Y.   | 2     | 170   | 40E   | 4a, b    |
|               |          |                    | tubulosa .....Hall.                 | “ “          | 2     | 49    | 19    | 2a-c     |
|               |          |                    | verrucosa .....Hall.                | “ “          | 2     | 48    | 19    | 1a       |
| “             | 1492     | Gen. and Sp. Type. | “ ..... “                           | “ “          | 2     | 48    | 19    | 1b, c    |
|               |          |                    |                                     |              |       |       |       |          |
| Niag.         | 1910     | Type.              | <b>Sagenella</b> Hall.              |              |       |       |       |          |
|               |          |                    | elegans .....Hall.                  | N. Y. S. M.  | 28    | 118   | 7     | 12, 13   |
| “             | 1740     | Gen. and Sp. Type. | membranacea .....Hall.              | Pal. N. Y.   | 2     | 172   | 40E   | 6a, b    |
|               |          |                    |                                     |              |       |       |       |          |
| Cl.           | 1502     | Type.              | <b>Stictopora</b> Hall.             |              |       |       |       |          |
|               |          |                    | crassa.....Hall.                    | Pal. N. Y.   | 2     | 45    | 18    | 4b, c    |
| Niag.         | 1741     | “                  | dichotoma.....Hall.                 | “ “          | 2     | 163   | 40C   | 3a, b    |
|               |          |                    |                                     |              |       |       |       |          |
| “             | 1759     | “                  | punctipora.....Hall.                | “ “          | 2     | 157   | 40B   | 2a-c     |
|               |          |                    |                                     |              |       |       |       |          |
| Cl.           | 1503     | “                  | raripora.....Hall.                  | “ “          | 2     | 46    | 18    | 5a, c    |
|               |          |                    | “ ..... “                           | “ “          | 2     | 46    | 18    | 5b       |
| Niag.         | 1926     | “                  | similis .....Hall.                  | N. Y. S. M.  | 28    | 122   | 11    | 13-16    |
|               |          |                    |                                     |              |       |       |       |          |
| Cl.           | 1491     | “                  | <b>Sub-retepora</b> d'Orbigny.      |              |       |       |       |          |
|               |          |                    | angulata .....Hall.                 | Pal. N. Y.   | 2     | 49    | 19    | 3a-d     |
| “             | 1491     | “                  | “ ..... “                           | “ “          | 2     | 49    | 22    | 3e-h     |
|               |          |                    |                                     |              |       |       |       |          |
| Niag.         | 1732     | “                  | asperato-striata....Hall.           | “ “          | 2     | 161   | 40C   | 2a, c-h  |
|               |          |                    | “ ..... “                           | “ “          | 2     | 161   | 40C   | 2b       |



Class POLYZOA—Continued.

| LOCALITY.              | REMARKS.                                                                                                                                                                                                              |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                  | Specific name spelled <i>lilia</i> .                                                                                                                                                                                  |
| .....                  | As <i>Fenestella</i> ( <i>Polypora</i> ) <i>lilæa</i> .                                                                                                                                                               |
| Nr. Clarksville, N. Y. | Shows celluliferous face.                                                                                                                                                                                             |
| Flamboro' Hd., Ont.    | As <i>Phænopora ensiformis</i> . Two blocks showing specimens figured and many others.                                                                                                                                |
| .....                  | As <i>Escharopora lirata</i> .                                                                                                                                                                                        |
| .....                  | " <i>E. (Ptilodictya)</i> "                                                                                                                                                                                           |
| Nr. Clarksville, N. Y. | Base of a colony, imbedded. See also <i>Rhinidictya granulosa</i> .                                                                                                                                                   |
| .....                  | As <i>Paleschara bifoliata</i> .                                                                                                                                                                                      |
| .....                  | " <i>Escharopora</i> (? <i>Paleschara</i> ) <i>bifoliata</i> .                                                                                                                                                        |
| .....                  | " <i>Paleschara foliata</i> (by error).                                                                                                                                                                               |
| Schoharie, N. Y.       | A large crushed and broken frond, imbedded.                                                                                                                                                                           |
| .....                  | As <i>Escharopora tenuis</i> .                                                                                                                                                                                        |
| .....                  | " " "                                                                                                                                                                                                                 |
| Clarksville, N. Y.     | Shows longitudinal section, imbedded.                                                                                                                                                                                 |
| " "                    | Well preserved fragment imbedded with <i>Callotrypa macropora</i> , figs. 25, 26, pl. 11, and <i>C. macropora</i> var. <i>signata</i> , figs. 30, 31, pl. 11.                                                         |
| .....                  | See <i>Sub-retepora angulata</i> .                                                                                                                                                                                    |
| .....                  | " " " <i>asperato-striata</i> .                                                                                                                                                                                       |
| .....                  | " <i>Thamniscus diffusa</i> .                                                                                                                                                                                         |
| Clarksville, N. Y.     | As <i>Escharopora (Ptilodictya) lirata</i> H. Frag. of stipe, imbedded.                                                                                                                                               |
| Lockport, N. Y.        | A small, well preserved fragment.                                                                                                                                                                                     |
| Flamboro' Hd., Ont.    | A flattened, hollow fragment filled with shale.                                                                                                                                                                       |
| " " "                  | Fragment of frond, somewhat weatherworn, imbedded.                                                                                                                                                                    |
| Wayne Co., N. Y.       | Fragment, imbedded. From " Hill's Mill."                                                                                                                                                                              |
| Waldron, Ind.          | On a cast of <i>Ambonychia acutirostra</i> .                                                                                                                                                                          |
| Lockport, N. Y.        | A large frond on a fragment of an orthoceras.                                                                                                                                                                         |
| Flamboro' Hd., Ont.    | Small fragment imbedded with <i>Stictopora varipora</i> , figs. 5a-c, pl. 18 and <i>Cornulites distans</i> , fig. 9b, pl. A41.                                                                                        |
| Lockport, N. Y.        | As <i>Hornera</i> (?) <i>dichotoma</i> . The specimen wh. bears Prof. Hall's orig. ticket and ref. to these figs. is not like either description or figs., but is elliptical in section and poriferous on both sides. |
| " "                    | Two stems imbedded. Same block has <i>Trematopora aspera</i> , figs. 10a, b, pl. 40A.                                                                                                                                 |
| Flamboro' Hd., Ont.    | Two small fragments imbedded with <i>Stictopora crassa</i> , figs. 4b, c, pl. 18 and <i>Cornulites distans</i> , fig. 9b, pl. A41.                                                                                    |
| " "                    | Small fragment in block with <i>Helopora fragilis</i> , figs. 3b, d, pl. 18.                                                                                                                                          |
| Waldron, Ind.          | Two small, branching fragments ; free.                                                                                                                                                                                |
| Wayne Co., N. Y.       | As <i>Retepora angulata</i> . Two large fragments, imbedded.                                                                                                                                                          |
| Flamboro' Hd., Ont.    | " " " Two small fragments, imbedded with <i>Phænopora explanata</i> , fig. 6d, pl. 18.                                                                                                                                |
| Lockport, N. Y.        | As <i>Retepora asperato-striata</i> . Five fragm. showing the dif. features.                                                                                                                                          |
| " "                    | " " " Fragment imbedded with <i>Fenestella elegans</i> , figs. 1a-c and <i>F. cribrosa</i> , figs. 3a, b, pl. 40D.                                                                                                    |

MOLLUSCOIDEA—Continued.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR. | REFERENCE.   |             |      |        |                     |
|---------------|----------|-------------------|----------------------------|--------------|-------------|------|--------|---------------------|
|               |          |                   |                            | Work.        | Vol.        | P.   | Pl.    | Figs.               |
| L. H.         | 2334     | Type.             | <b>Thamniscus</b> King.    |              |             |      |        |                     |
|               |          |                   | ? cisseis.....Hall.        | N. Y. S. M.  | 32          | 176  |        |                     |
|               |          |                   | "                          | St. G. N. Y. | 2           | .... | 22     | 24, 29              |
|               |          |                   | H. & S.                    | Pal. N. Y.   | 6           | 42   | 22     | 24, 29              |
|               |          |                   | " .....Hall.               | St. G. N. Y. | 2           | .... | 22     | 30, <i>enl.</i>     |
| Niag.         | 1733     | "                 | H. & S.                    | Pal. N. Y.   | 6           | 42   | 22     | 30, <i>enl.</i>     |
|               |          |                   | diffusus .....Hall.        | " "          | 2           | 160  | 40C    | 1a                  |
|               |          |                   | " ..... "                  | Geol. N. Y.  | 4th D.      | 116  | ct. 43 | 2, 3                |
|               |          |                   | "                          | Pal. N. Y.   | 2           | 160  | 40C    | 1b, c, e            |
|               |          |                   | niagarensis.....Hall.      | N. Y. S. M.  | 28          | 126  | 11     | 22-25               |
| L. H.         | 2335     | Type.             | " ..... "                  | Pal. N. Y.   | 2           | 166  | 40D    | 4                   |
|               |          |                   | variolatus .....Hall.      | N. Y. S. M.  | 32          | 175  |        |                     |
|               |          |                   | "                          | St. G. N. Y. | 2           | .... | 22     | 44, <i>enl.</i>     |
|               |          |                   | H. & S.                    | Pal. N. Y.   | 6           | 41   | 22     | 44, <i>enl.</i>     |
|               |          |                   | <b>Trematopora</b> Hall.   |              |             |      |        |                     |
| Niag.         | 1755     | "                 | aspera .....Hall.          | Pal. N. Y.   | 2           | 154  | 40A    | 10a, b              |
|               |          |                   | " ..... "                  | " "          | 2           | 154  | 40A    | 10c (1st)           |
|               |          |                   | " ..... "                  | " "          | 2           | 154  | 40A    | 10c (2d)            |
|               |          |                   | coalescens .....Hall.      | " "          | 2           | 150  | 40A    | 2a, b               |
|               |          |                   | ? corticosa .....Hall.     | N. Y. S. M.  | 26          | 105  |        |                     |
| Niag.         | 1915     | Type.             | "                          | "            | 32          | 149  | ....   | ....                |
|               |          |                   | "                          | St. G. N. Y. | 2           | .... | 10     | 1-3                 |
|               |          |                   | H. & S.                    | Pal. N. Y.   | 6           | 15   | 10     | 1-3                 |
|               |          |                   | densa.....                 |              |             |      |        |                     |
|               |          |                   | echinata.....Hall.         | N. Y. S. M.  | 28          | 112  | 11     | 1-5                 |
| Niag.         | 1916     | Type.             | granulifera .....Hall.     | Pal. N. Y.   | 2           | 154  | 40A    | 9a, b               |
|               |          |                   | " ..... "                  | " "          | 2           | 154  | 40A    | 9c, d               |
|               |          |                   | " ..... "                  | " "          | 2           | 154  | 40A    | 9e                  |
|               |          |                   | " ..... "                  | N. Y. S. M.  | 28          | 112  | 11     | 6, 7                |
|               |          |                   | infrequens .....Hall.      | " "          | 28          | 111  | 10     | 3, 4                |
| Niag.         | 1917     | Type.             | maculosa.....              |              |             |      |        |                     |
|               |          |                   | minuta.....Hall.           | N. Y. S. M.  | 28          | 113  | 11     | 8, <i>enl.</i> × 12 |
|               |          |                   | osculum.....Hall.          | " "          | 28          | 110  | 10     | 11, 12              |
|               |          |                   | " ..... "                  | " "          | 28          | 110  | 10     | 5-8                 |
|               |          |                   | " ..... "                  | " "          | 28          | 110  | 10     | 13, 14              |
| Niag.         | 1758     | "                 | ostiolata.....Hall.        | Pal. N. Y.   | 2           | 152  | 40A    | 5a                  |
|               |          |                   | " ..... "                  | " "          | 2           | 152  | 40A    | 5b-n                |
|               |          |                   | parallela.....             |              |             |      |        |                     |
|               |          |                   | punctata .....Hall.        | Pal. N. Y.   | 2           | 151  | 40A    | 4a-c                |
|               |          |                   | regularis.....             |              |             |      |        |                     |
| Niag.         | 1749     | Type.             | signata.....               |              |             |      |        |                     |
|               |          |                   | solida .....Hall.          | Pal. N. Y.   | 2           | 153  | 40A    | 6a-c                |
|               |          |                   | sparsa.....Hall.           | " "          | 2           | 155  | 40A    | 12a, c              |
|               |          |                   | " ..... "                  | " "          | 2           | 155  | 40A    | 12b, d              |
|               |          |                   | spiculata.....Hall.        | Cat. P. F.   | 1877        | 245  |        |                     |
| Niag.         | 1921     | "                 | "                          | N. Y. S. M.  | 28, 1st ed. | .... | 11     | 11, 12              |
|               |          |                   | "                          | " "          | 28, 2d ed.  | 114  | 11     | 11, 12              |
|               |          |                   | spinulosa.....Hall.        | Pal. N. Y.   | 2           | 155  | 40A    | 11a, c              |
|               |          |                   | striata .....Hall.         | " "          | 2           | 153  | 40A    | 7a-b†               |
|               |          |                   | " ..... "                  | " "          | 2           | 153  | 40A    | 8a-b†               |
| Niag.         | 1916     | "                 | subimbricata .....Hall.    | T. A. I.     | 10          | 60   |        |                     |
|               |          |                   | "                          | N. Y. S. M.  | 28, 1st ed. | .... | 10     | 9, 10               |
|               |          |                   | "                          | " "          | 28, 2d ed.  | ..   | 10     | 9, 10               |
|               |          |                   |                            |              |             |      |        |                     |
|               |          |                   |                            |              |             |      |        |                     |



Class POLYZOA—Continued.

| LOCALITY.              | REMARKS.                                                                                                         |
|------------------------|------------------------------------------------------------------------------------------------------------------|
| Nr. Clarksville, N. Y. | Several fragments imbedded together.                                                                             |
| “ “ “                  | A short fragment, imbedded.                                                                                      |
| Lockport, N. Y.        | As <i>Retepora diffusa</i> . A large frond, imbedded ; shows striated side.                                      |
| .....                  | As a “Coral resembling <i>Isis</i> .”                                                                            |
| Lockport, N. Y.        | As <i>Retepora diffusa</i> . Part of a large, thick-stemmed frond, imbedded.                                     |
| Waldron, Ind.          | Three fronds, imbedded. Both surfaces are shown.                                                                 |
| Lockport, N. Y.        | As <i>Fenestella</i> sp. The base of a frond.                                                                    |
| Clarksville, N. Y.     | A branched fragment, imbedded.                                                                                   |
| Lockport, N. Y.        | Short stem imbedded with <i>Stictopora punctipora</i> , figs. 2a-c, pl. 40B.                                     |
| “ “                    | Small branched stem imbedded with <i>Trematopora granulifera</i> , figs.                                         |
| “ “                    | 9c, d, and <i>T. spinulosa</i> , figs. 11a, c, pl. 40A.                                                          |
| “ “                    | Imbedded with <i>T. granulifera</i> , fig. 9a, pl. 40A.                                                          |
| “ “                    | A small, irregular colony.                                                                                       |
| .....                  | As <i>Chaetetes corticosus</i> .                                                                                 |
| .....                  | “ <i>Trematopora</i> ( <i>Chaetetes</i> ) <i>corticosus</i> .                                                    |
| Clarksville, N. Y.     | “ <i>T. ?</i> ( <i>Trematella ?</i> ). Two branches imbedded with <i>Callopora perelegans</i> , fig. 14, pl. 12. |
| .....                  | See <i>Monotrypella densa</i> .                                                                                  |
| Waldron, Ind           | Three fragments, imbedded separately.                                                                            |
| Lockport, N. Y.        | Imbedded with <i>Trematopora aspera</i> , fig. 10c (2d), pl. 40A.                                                |
| “ “                    | “ “ “ “ fig. 10c (1st), pl. 40A, and <i>T.</i>                                                                   |
| “ “                    | <i>spinulosa</i> , fig. 11a, same plate.                                                                         |
| “ “                    | Stem with several branches, imbedded. Series has two unfig'd types.                                              |
| Waldron, Ind.          | A branching fragment, imbedded.                                                                                  |
| “ “                    | Several fragments, imbedded with other species.                                                                  |
| .....                  | See <i>Lichenalia maculosa</i> .                                                                                 |
| Waldron, Ind.          | As <i>Trematopora ?</i> ( <i>Trachypora ?</i> ) <i>minuta</i> in the 1st ed. of the report.                      |
| “ “                    | A short, tubular (?) fragment, compressed, imbedded.                                                             |
| “ “                    | Two small fragments imbedded together.                                                                           |
| “ “                    | A straight, cylindrical fragment, imb. See also <i>T. subimbricata</i> .                                         |
| Lockport, N. Y.        | Small branched stem springing from around a crinoid column.                                                      |
| “ “                    | Seven simple and branching stems, imbedded and free.                                                             |
| .....                  | See <i>Orthopora parallela</i> .                                                                                 |
| Lockport, N. Y.        | Incrusts a crinoid column. Several unfigured types are in the series.                                            |
| .....                  | See <i>Orthopora regularis</i> .                                                                                 |
| .....                  | “ <i>Callotrypa signata</i> .                                                                                    |
| Lockport, N. Y.        | Two small, branching fragments                                                                                   |
| “ “                    | A small, bifurcating stem, imbedded.                                                                             |
| “ “                    | A weathered simple fragm., imbedded. Series has two unfigured types.                                             |
| .....                  | As <i>Trematopora spinulosa</i> Hall.                                                                            |
| Waldron, Ind.          | Long, branching stem, imbedded.                                                                                  |
| Lockport, N. Y.        | A simple stem imbedded with <i>T. granulifera</i> and <i>T. aspera</i> , figs.                                   |
| “ “                    | 9c, d and 10c (1st), pl. 40A. See also <i>T. spiculata</i> .                                                     |
| “ “                    | Small, branching fragment.                                                                                       |
| “ “                    | Small, irregular mass.                                                                                           |
| .....                  | As <i>T. osculum</i> Hall.                                                                                       |
| Waldron, Ind.          | A large, branching fragment, imbedded.                                                                           |

MOLLUSCOIDEA—Continued.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.            | REFERENCE.   |      |      |      |                 |
|---------------|----------|--------------------|---------------------------------------|--------------|------|------|------|-----------------|
|               |          |                    |                                       | Work.        | Vol. | P.   | Pl.  | Figs.           |
| Niag.         | 1747     | Gen. and Sp. Type. | <b>Trematopora</b> Hall— <i>Cont.</i> |              |      |      |      |                 |
|               |          |                    | tuberculosa . . . . . Hall.           | Pal. N. Y.   | 2    | 149  | 40A  | 1a-g            |
|               | 1748     |                    | tubulosa . . . . . Hall.              | " "          | 2    | 151  | 40A  | 3a-c, e         |
|               | 1920     |                    | varia. . . . . Hall.                  | N. Y. S. M.  | 28   | 111  | 10   | 15-20           |
|               | "        | "                  | " . . . . . "                         | " "          | 28   | 111  | 10   | 21-23           |
|               | 1922     |                    | variolata. . . . . Hall.              | " "          | 28   | 113  | 11   | 9, 10           |
| "             | 1751     | Fig'd.             | sp. . . . . Hall.                     | Pal. N. Y.   | 2    | .... | 40A  | 13a, b          |
| L. H.         | 2333     | Type.              | <b>Unitrypa</b> Hall.                 |              |      |      |      |                 |
|               |          |                    | præcursor . . . . . Hall.             | N. Y. S. M.  | 26   | 94   | .... | ....            |
|               |          |                    | "                                     | St. G. N. Y. | 2    | .... | 21   | 14, <i>enl.</i> |
|               |          |                    |                                       |              |      |      | 22   | 4, <i>n.s.</i>  |
|               |          |                    | H. & S.                               | Pal. N. Y.   | 6    | 54   | 21   | 14, <i>enl.</i> |
|               |          |                    |                                       |              |      |      | 22   | 4, <i>n.s.</i>  |
| "             | "        | "                  | " . . . . . Hall.                     | St. G. N. Y. | 2    | .... | 21   | 17, <i>enl.</i> |
|               |          |                    | H. & S.                               | Pal. N. Y.   | 6    | 54   | 21   | 17, "           |

Class BRACHIOPODA

|       |                  |                    |                                    |              |             |      |        |                     |
|-------|------------------|--------------------|------------------------------------|--------------|-------------|------|--------|---------------------|
| Cl.   | <u>1516</u><br>1 | Fig'd.             | <b>Amphistrophia</b> Hall.         | ....         | ....        | .... | ....   | ....                |
|       |                  |                    | corrugata ( <i>Con.</i> )... Hall. | Geol. N. Y.  | 4th D.      | 72   | ct. 17 | 2                   |
|       |                  |                    | "                                  | Pal. N. Y.   | 2           | 59   | 21     | 2b, f               |
|       |                  |                    | "                                  | "            | 2           | 59   | 21     | 2c                  |
|       |                  |                    | "                                  | "            | 2           | 59   | 21     | 2d                  |
|       |                  |                    | "                                  | St. G. N. Y. | 2           | .... | 46     | 1                   |
|       |                  |                    | H. & C.                            | Pal. N. Y.   | 8, pt. 1    | .... | 15     | 1                   |
|       |                  |                    | " ( <i>Con.</i> )... Hall.         | "            | 2           | 59   | 21     | 2e                  |
|       |                  |                    |                                    |              |             |      |        |                     |
|       |                  |                    |                                    |              |             |      |        |                     |
| Niag. | <u>1525</u><br>2 | Gen. and Sp. Type. | striata.. . . . Hall.              | Pal. N. Y.   | 2           | 259  | 53     | 7                   |
|       |                  |                    | " . . . . . "                      | N. Y. S. M.  | 28          | 152  | 23     | 1-3                 |
|       |                  |                    | "                                  | St. G. N. Y. | 2           | .... | 43     | 1, <i>d.v.</i>      |
|       |                  |                    | H. & C.                            | "            | 11          | 283  | 15     | 12, "               |
|       |                  |                    | "                                  | Pal. N. Y.   | 8, pt. 1    | 291  | 12     | 1, "                |
|       |                  |                    | " . . . . . Hall.                  | N. Y. S. M.  | 28          | 152  | 23     | 4, 6                |
|       |                  |                    | "                                  | St. G. N. Y. | 2           | .... | 43     | 3, <i>enl.</i>      |
|       |                  |                    | H. & C.                            | "            | 11          | 283  | 15     | 14, "               |
|       |                  |                    | "                                  | Pal. N. Y.   | 8, pt. 1    | 291  | 12     | 3, "                |
|       |                  |                    | " . . . . . Hall.                  | N. Y. S. M.  | 28          | 152  | 23     | 5, <i>int. v.v.</i> |
| "     | <u>1525</u><br>5 | "                  | "                                  | St. G. N. Y. | 2           | .... | 43     | 2, "                |
|       |                  |                    | H. & C.                            | "            | 11          | 283  | 15     | 13, "               |
|       |                  |                    | "                                  | Pal. N. Y.   | 8, pt. 1    | 291  | 12     | 2, "                |
|       |                  |                    |                                    |              |             |      |        |                     |
|       |                  |                    |                                    |              |             |      |        |                     |
|       |                  |                    |                                    |              |             |      |        |                     |
|       |                  |                    |                                    |              |             |      |        |                     |
|       |                  |                    |                                    |              |             |      |        |                     |
|       |                  |                    |                                    |              |             |      |        |                     |
|       |                  |                    |                                    |              |             |      |        |                     |
| Niag. | 1943             | Type.              | <b>Anastrophia</b> Hall.           |              |             |      |        |                     |
|       |                  |                    | internascens . . . . . Hall.       | N. Y. S. M.  | 28, 2d ed.  | 168  | 26     | 41-49               |
|       |                  |                    | "                                  | "            | 28, 1st ed. | .... | 26     | 41-49               |
|       |                  |                    |                                    |              |             |      |        |                     |
|       |                  |                    |                                    |              |             |      |        |                     |
|       |                  |                    |                                    |              |             |      |        |                     |
|       |                  |                    |                                    |              |             |      |        |                     |
|       |                  |                    |                                    |              |             |      |        |                     |
|       |                  |                    |                                    |              |             |      |        |                     |
|       |                  |                    |                                    |              |             |      |        |                     |
| L. H. | <u>2497</u><br>1 | Gen. and Sp. Type. | Verneuili. . . . . Hall.           | "            | 10          | 104  | ....   | ....                |
|       |                  |                    | "                                  | Pal. N. Y.   | 3           | 260  | 48     | 1a-s                |
|       |                  |                    | "                                  | N. Y. S. M.  | 20          | 163  | ....   | ....                |
|       |                  |                    | H. & C.                            | Pal. N. Y.   | 8, pt. 2    | 224  | 63     | 31, 32              |
|       |                  |                    | " . . . . . Hall.                  | "            | 3           | 260  | 48     | 1t-x                |
|       |                  |                    |                                    |              |             |      |        |                     |
|       |                  |                    |                                    |              |             |      |        |                     |
|       |                  |                    |                                    |              |             |      |        |                     |
|       |                  |                    |                                    |              |             |      |        |                     |
|       |                  |                    |                                    |              |             |      |        |                     |



Class POLYZOA—Continued.

| LOCALITY.                                                                                                                                                                      | REMARKS.                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Lockport, N. Y.                                                                                                                                                                | Four branching fragments.                                                                                                                           |
| “ “                                                                                                                                                                            | Small fragment of a large stem.                                                                                                                     |
| Waldron, Ind.                                                                                                                                                                  | Three rather small, irregular, branching fragments, imbedded.                                                                                       |
| “ “                                                                                                                                                                            | Large, irregular branching frond, imbedded.                                                                                                         |
| “ “                                                                                                                                                                            | Small, branching fragment.                                                                                                                          |
| Lockport, N. Y.                                                                                                                                                                | Shows base of a branch.                                                                                                                             |
| .....                                                                                                                                                                          | Defined as a subgenus of <i>Fenestella</i> .                                                                                                        |
| .....                                                                                                                                                                          | As <i>Fenestella præcursor</i> .                                                                                                                    |
| .....                                                                                                                                                                          | “ “ “                                                                                                                                               |
| .....                                                                                                                                                                          | “ <i>F. (Polypora) compacta</i> Hall, by error.                                                                                                     |
| Clarksville, N. Y.                                                                                                                                                             | As <i>F. (Polypora) compacta</i> Hall, by error. A frond imbedded with <i>Ptychonema helderbergiæ</i> , fig. 16, pl. 9.                             |
| .....                                                                                                                                                                          | As <i>Fenestella præcursor</i> .                                                                                                                    |
| Clarksville, N. Y.                                                                                                                                                             | Shows non-celluliferous side. Imbedded with <i>Polypora compacta</i> , figs. 1, 2, pl. 18.                                                          |
| N. B. Among the specimens from Waldron, Indiana, many of the blocks bear types of more than one species of polyzoan each. One block bears ten type specimens of seven species. |                                                                                                                                                     |
| .....                                                                                                                                                                          | Defined as a subgenus of <i>Strophonella</i> .                                                                                                      |
| .....                                                                                                                                                                          | As <i>Strophomena corrugata</i> .                                                                                                                   |
| Rochester, N. Y.                                                                                                                                                               | “ <i>Leptæna corrugata</i> . Int. imprint ventral valve, w. some shell.                                                                             |
| “ “                                                                                                                                                                            | “ “ “ Exterior imprint of ventral valve.                                                                                                            |
| .....                                                                                                                                                                          | “ “ “                                                                                                                                               |
| .....                                                                                                                                                                          | “ <i>Strophodonta corrugata</i> .                                                                                                                   |
| Sodus, N. Y.                                                                                                                                                                   | “ <i>Stropheodonta</i> “ Int. impr. dorsal valve ; not a ventr. valve.                                                                              |
| New Hartford, N. Y.                                                                                                                                                            | “ <i>Leptæna corrugata</i> . Exterior imprint dorsal (?) valve.                                                                                     |
| Lockport, N. Y.                                                                                                                                                                | “ <i>Leptæna striata</i> . An exfoliated valve, imbedded.                                                                                           |
| .....                                                                                                                                                                          | “ <i>Strophodonta striata</i> .                                                                                                                     |
| .....                                                                                                                                                                          | “ “ ( <i>Strophonella</i> ?) <i>striata</i> .                                                                                                       |
| .....                                                                                                                                                                          | Type of subgenus <i>Amphistrophia</i> .                                                                                                             |
| Waldron, Ind.                                                                                                                                                                  | As <i>Strophonella</i> (—— —) <i>striata</i> . An entire adult.                                                                                     |
| .....                                                                                                                                                                          | “ <i>Strophodonta striata</i> .                                                                                                                     |
| .....                                                                                                                                                                          | “ “ ( <i>Strophonella</i> ?) <i>striata</i> .                                                                                                       |
| .....                                                                                                                                                                          |                                                                                                                                                     |
| Waldron, Ind.                                                                                                                                                                  | “ <i>Strophonella</i> (—— —) <i>striata</i> . Dorsal valve, imbedded.                                                                               |
| .....                                                                                                                                                                          | “ <i>Strophodonta striata</i> .                                                                                                                     |
| .....                                                                                                                                                                          | “ “ ( <i>Strophonella</i> ?) <i>striata</i> .                                                                                                       |
| .....                                                                                                                                                                          |                                                                                                                                                     |
| Waldron, Ind.                                                                                                                                                                  | “ <i>Strophonella</i> (—— —) <i>striata</i> . Ventral valve, imbedded.                                                                              |
| .....                                                                                                                                                                          |                                                                                                                                                     |
| Waldron, Ind.                                                                                                                                                                  | As types of <i>Anastrophia Verneuili</i> Hall. Three individuals.                                                                                   |
| .....                                                                                                                                                                          | As <i>Pentamerus Verneuili</i> .                                                                                                                    |
| .....                                                                                                                                                                          | “ “ “                                                                                                                                               |
| .....                                                                                                                                                                          | Made the type of the genus <i>Anastrophia</i> .                                                                                                     |
| Nr. Clarksville, N. Y.                                                                                                                                                         | Eight entire individuals, ranging from very small to very large.                                                                                    |
| “ “ “                                                                                                                                                                          | As <i>Pentamerus Verneuili</i> . Three fragm. showing int. of the opposite valves and the two conjoined. See also <i>Anastrophia internascens</i> . |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.     | REFERENCE.  |          |       |        |               |
|---------------|----------|-------------------|--------------------------------|-------------|----------|-------|--------|---------------|
|               |          |                   |                                | Work.       | Vol.     | P.    | Pl.    | Figs.         |
| Cl.           | 1528     | Fig'd.            | <b>Athyris</b> McCoy           |             |          |       |        |               |
| "             | 1        | "                 | congesta (Con.)....Hall.       | Pal. N. Y.  | 2        | 67    | 23     | 1b, c, e      |
|               |          |                   | " " " " " " " "                | " "         | 2        | 68    | 23     | 2c-f          |
|               |          |                   | <b>Atrypa</b> Dalman.          |             |          |       |        |               |
|               |          |                   | æquiradiata .....              | .....       | .....    | ..... | .....  | .....         |
|               |          |                   | affinis .....                  | .....       | .....    | ..... | .....  | .....         |
|               |          |                   | bidens .....                   | .....       | .....    | ..... | .....  | .....         |
|               |          |                   | bidentata .....                | .....       | .....    | ..... | .....  | .....         |
| Niag.         | 1779     | Type.             | camura.....Hall.               | Pal. N. Y.  | 2        | 273   | 56     | 3a-d, g-u     |
|               |          |                   | congesta .....                 | .....       | .....    | ..... | .....  | .....         |
|               |          |                   | coralifera .....               | .....       | .....    | ..... | .....  | .....         |
|               |          |                   | crassirostra .....             | .....       | .....    | ..... | .....  | .....         |
|               |          |                   | cuneata .....                  | .....       | .....    | ..... | .....  | .....         |
|               |          |                   | cylindrica .....               | .....       | .....    | ..... | .....  | .....         |
|               |          |                   | disparilis .....               | .....       | .....    | ..... | .....  | .....         |
|               |          |                   | emacerata .....                | .....       | .....    | ..... | .....  | .....         |
| Cl.           | 1537     | Type.             | gibbosa .....                  | Pal. N. Y.  | 2        | 79    | 20     | 10a-c         |
|               |          |                   | hemispherica.....              | .....       | .....    | ..... | .....  | .....         |
|               |          |                   | intermedia .....               | .....       | .....    | ..... | .....  | .....         |
| Cor.          | 1856     | Type.             | lamellata .....                | Pal. N. Y.  | 2        | 329   | 74     | 11a-d         |
|               |          |                   | naviformis.....                | .....       | .....    | ..... | .....  | .....         |
|               |          |                   | neglecta .....                 | .....       | .....    | ..... | .....  | .....         |
|               |          |                   | nitida .....                   | .....       | .....    | ..... | .....  | .....         |
|               |          |                   | " var. oblata.....             | .....       | .....    | ..... | .....  | .....         |
| Niag.         | 1785     | Type.             | nodostriata.....Hall.          | Pal. N. Y.  | 2        | 272   | 56     | 2d-u          |
|               |          |                   | oblata .....                   | .....       | .....    | ..... | .....  | .....         |
|               |          |                   | obtusiplicata.....             | .....       | .....    | ..... | .....  | .....         |
|               |          |                   | plicata .....                  | .....       | .....    | ..... | .....  | .....         |
|               |          |                   | quadriricostata .....          | .....       | .....    | ..... | .....  | .....         |
| Cl.           | 1536     | Fig'd.            | reticularis (Linn.) Hall.      | Geol. N. Y. | 4thD.    | 73    | ct. 17 | 8, v.v.       |
|               | 1        | "                 | " " " "                        | Pal. N. Y.  | 2        | 72    | 23     | 8a, "         |
| "             | "        | "                 | " " " "                        | " "         | 2        | 72    | 23     | 8b-e          |
| "             | "        | "                 | " " " "                        | " "         | 2        | 72    | 23     | 8h, v.v.      |
| "             | "        | "                 | " " " "                        | " "         | 2        | 72    | 23     | 8i, f         |
| Niag.         | 1536     | "                 | " " " "                        | " "         | 2        | 270   | 55     | 5a-r. t       |
| "             | 4        | "                 | " " " "                        | " "         | 2        | 270   | 55     | 5s, int. v.v. |
| "             | 1536     | "                 | " " " "                        | " "         | 2        | 270   | 55     | 5u, v.v.      |
| "             | 5        | "                 | " " " "                        | " "         | 2        | 270   | 55     | 5u, v.v.      |
| L. H.         | 1536     | "                 | " " " "                        | " "         | 3        | 253   | 42     | 1a-l          |
|               | 14       | "                 | " " " "                        | " "         | 3        | 253   | 42     | 1a-l          |
|               |          |                   | " " " " H. & C.                | " "         | 8, pt. 2 | 166   | 55     | 3, 4          |
| "             | "        | "                 | " " (Linn) Hall.               | " "         | 3        | 253   | 42     | 1m-o          |
| "             | "        | "                 | " " " "                        | " "         | 3        | 253   | 42     | 1p, r         |
| Niag.         | 1536     | Fig'd.            | " " " "                        | N. Y. S. M. | 28       | 162   | 25     | 44, 45        |
| "             | 7        | "                 | " " " "                        | " "         | 28       | 162   | 25     | 46, 47        |
|               |          |                   | " " " " H. & C.                | Pal. N. Y.  | 8, pt. 2 | 166   | 55     | 2, ext. v.v.  |
| "             | 1784     | Type.             | rugosa.....Hall.               | " "         | 2        | 271   | 56     | 1c-l          |
| "             | "        | "                 | " " " "                        | " "         | 2        | 271   | 56     | 1m, n         |
|               |          |                   | sp. ....Hall.                  | " "         | 2        | 277   | 57     | 5a, b         |
|               |          |                   | sp. ....Hall.                  | " "         | 2        | 78    | 24     | 5a, b         |
|               |          |                   | sp. ....Hall.                  | " "         | 2        | 269   | 55     | 3c, e         |
|               |          |                   | <b>Atrypina</b> Hall & Clarke. |             |          |       |        |               |
| Niag.         | 1781     | Type.             | disparilis.....Hall.           | Pal. N. Y.  | 2        | 277   | 57     | 6b-h          |
| "             | 1        | "                 | " " " "                        | " "         | 2        | 277   | 57     | 6l, m         |
| "             | 1781     | "                 | " " " "                        | N. Y. S. M. | 28       | 162   | 25     | 39-41         |
|               | 3        | "                 | " " " " H. & C.                | Pal. N. Y.  | 8, pt. 2 | 162   | 53     | 1-3           |
| "             | "        | "                 | " " " " Hall.                  | N. Y. S. M. | 28       | 162   | 25     | 42, 43        |



| LOCALITY.              | REMARKS.                                                                                                     |
|------------------------|--------------------------------------------------------------------------------------------------------------|
| Reynale's Basin, N.Y.  | As <i>Atrypa congesta</i> . A small, exfoliated indiv. and a large, entire one.                              |
| " " "                  | As a type of <i>Atrypa quadricostata</i> H. Large, nearly entire.                                            |
| .....                  | See <i>Camarotæchia æquiradiata</i> .                                                                        |
| .....                  | " <i>Atrypa reticularis</i> .                                                                                |
| .....                  | " <i>Camarotæchia bidens</i> .                                                                               |
| .....                  | " <i>Rhynchotreta cuneata</i> , var. <i>americana</i> .                                                      |
| Lockport, N. Y.        | Eight indiv. Figs. 3e, f are of <i>Trigleria lepida</i> of the Ham. grp., q. v.                              |
| .....                  | See <i>Athyris congesta</i> .                                                                                |
| .....                  | " <i>Eichwaldia corallifera</i> .                                                                            |
| .....                  | " <i>Whitfieldella crassirostra</i> .                                                                        |
| .....                  | " <i>Rhynchotreta cuneata</i> , var. <i>americana</i> .                                                      |
| .....                  | " <i>Whitfieldella cylindrica</i> .                                                                          |
| .....                  | " <i>Atrypina disparilis</i> .                                                                               |
| .....                  | " <i>Rhynchonella emacerata</i> .                                                                            |
| Clinton, N. Y.         | Possibly = <i>A. reticularis</i> . Int. casts two vent. and one dors. valve.                                 |
| .....                  | See <i>Cælospira hemispherica</i> .                                                                          |
| .....                  | " <i>Whitfieldella intermedia</i> .                                                                          |
| Schoharie, N. Y.       | Two individuals of medium size. See also <i>Camarotæchia neglecta</i> .                                      |
| .....                  | See <i>Whitfieldella naviiformis</i> .                                                                       |
| .....                  | " <i>Camarotæchia neglecta</i> .                                                                             |
| .....                  | " <i>Whitfieldella nitida</i> .                                                                              |
| .....                  | " " " var. <i>oblata</i> .                                                                                   |
| Lockport, N. Y.        | Five individuals forming series from young to adult.                                                         |
| .....                  | See <i>Whitfieldia oblata</i> .                                                                              |
| .....                  | " <i>Camarotæchia obtusiplicata</i> .                                                                        |
| .....                  | " <i>Rhynchonella plicata</i> .                                                                              |
| .....                  | " <i>Athyris congesta</i> .                                                                                  |
| .....                  | As <i>A. affinis</i> , Sow., ? var. ?                                                                        |
| Sodus, N. Y.           | Ext. impr. v. v. retaining fringe. On block with <i>Plectambonites sericeus</i> , fig. 1a, pl. 21, same vol. |
| " "                    | Two small individuals.                                                                                       |
| " "                    | A somewhat exfoliated ventral valve, imbedded.                                                               |
| " "                    | Two interior casts of ventral valve ; one retaining some shell.                                              |
| Lockport, N. Y.        | Seven individuals of various stages of growth and convexity.                                                 |
| " "                    | Muscular impression and hinge of ventral valve. Fig. a restoration.                                          |
| Rochester, N. Y.       | Exterior-interior imprint of a ventral valve.                                                                |
| Nr. Clarksville, N. Y. | Five entire individuals.                                                                                     |
| " "                    | A dorsal and two ventral valves showing internal features.                                                   |
| " "                    | Three individuals broken so as to show the spires, were used in making the figures.                          |
| Waldron, Ind.          | Two individuals of medium size.                                                                              |
| " "                    | A large, ventricose individual.                                                                              |
| Lockport, N. Y.        | Three individuals, one slightly crushed.                                                                     |
| " "                    | A large, somewhat broken ventral valve, imbedded.                                                            |
| .....                  | See <i>Camarotæchia neglecta</i> .                                                                           |
| .....                  | " <i>Whitfieldella intermedia</i> .                                                                          |
| .....                  | " " <i>nitida</i> , var. <i>oblata</i> .                                                                     |
| Lockport, N. Y.        | As <i>Atrypa disparilis</i> . Three individuals.                                                             |
| " "                    | " " A detached dorsal valve.                                                                                 |
| .....                  | " <i>Cælospira disparilis</i> .                                                                              |
| Waldron, Ind.          | Very perfect.                                                                                                |
| " "                    | Two entire individuals.                                                                                      |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.            | REFERENCE.   |          |       |       |               |
|---------------|------------------|--------------------|---------------------------------------|--------------|----------|-------|-------|---------------|
|               |                  |                    |                                       | Work.        | Vol.     | P.    | Pl.   | Figs.         |
| L. H.         | 2472             | Gen. and Sp. Type. | <b>Atrypina</b> H. & C.— <i>Cont.</i> |              |          |       |       |               |
|               |                  |                    | imbricata.....Hall.                   | N. Y. S. M.  | 10       | 108   | ....  | .....         |
|               |                  |                    | “ “ H. & C.                           | Pal. N. Y.   | 3        | 246   | 38    | 8-13          |
|               |                  |                    | “ “ .....Hall.                        | “ “          | 8, pt. 2 | 161   | ....  | .....         |
| Niag.         | $\frac{2062}{5}$ | Type.              | <b>Barrandella</b> H. & C.            |              |          |       |       |               |
|               |                  |                    | ventricosa.....Hall.                  | Geol. Wis.   | 1861     | 2     | ....  | .....         |
|               |                  |                    | “ “ H. & C.                           | N. Y. S. M.  | 20       | 374   | 13    | 18-21         |
|               |                  |                    | “ “ .....H. & W.                      | Pal. N. Y.   | 8, pt. 2 | 242   | 71    | 4, 5          |
| L. H.         | $\frac{2062}{7}$ | “                  |                                       | Pal. O.      | 2        | 138   | 7     | 7, 8          |
|               |                  |                    | <b>Bilobites</b> Linn.                |              |          |       |       |               |
|               |                  |                    | bilobus (Linn.)....Hall.              | Pal. N. Y.   | 2        | 260   | 54    | 1a-i          |
|               |                  |                    | varicus (Con.)....Hall.               | “ “          | 3        | 179   | 24    | 1a-k          |
| “             | 2423             | Fig'd.             | “ “ ..... “                           | St. G. N. Y. | 2        | ....  | 35    | 38-40         |
|               |                  |                    | “ “ H. & C.                           | Pal. N. Y.   | 8, pt. 1 | 205   | 5B    | 15-17         |
|               |                  |                    | “ (Con.)....Hall.                     | St. G. N. Y. | 2        | ....  | 35    | 41, 42        |
|               |                  |                    | “ “ H. & C.                           | Pal. N. Y.   | 8, pt. 1 | 205   | 5B    | 18, 19        |
| Cl.           | $\frac{1522}{1}$ | Type.              | <b>Brachyprion</b> Shaler.            |              |          |       |       |               |
|               |                  |                    | profundum.....Hall.                   | .....        | .....    | ..... | ..... | .....         |
|               |                  |                    | “ ? .... “                            | Pal. N. Y.   | 2        | 61    | 21    | 4a, b         |
|               |                  |                    | “ “ “                                 | “ “          | 2        | 61    | 21    | 5a-c          |
| Niag.         | $\frac{1522}{2}$ | Fig'd.             | “ “ H. & C.                           | St. G. N. Y. | 2        | ....  | 44    | 19, 20        |
|               |                  |                    | “ “ .....Hall.                        | Pal. N. Y.   | 8, pt. 1 | ....  | 13    | 19, 20        |
|               |                  |                    | “ “ .....Hall.                        | N. Y. S. M.  | 20       | 369   | 13    | 3, 4          |
|               |                  |                    | “ “ H. & C.                           | St. G. N. Y. | 2        | ....  | 44    | 1, 2          |
| “             | 1931             | “                  | “ “ “                                 | Pal. N. Y.   | 8, pt. 1 | ....  | 13    | 1, 2          |
|               |                  |                    | “ “ “                                 | “ “          | 8, pt. 1 | ....  | 13    | 3, n.s.       |
|               |                  |                    | “ “ .....Hall.                        | N. Y. S. M.  | 28       | 151   | 23    | 9, int. v.v.  |
|               |                  |                    | “ “ H. & C.                           | St. G. N. Y. | 2        | ....  | 44    | 4, 5          |
| L. H.         | $\frac{1931}{1}$ | “                  | “ “ .....Hall.                        | Pal. N. Y.   | 8, pt. 1 | ....  | 13    | 4, 5          |
|               |                  |                    | varistriatum (Con.) Hall.             | N. Y. S. M.  | 28       | 151   | 23    | 10, ext. v.v. |
|               |                  |                    | “ “ “                                 | Pal. N. Y.   | 3        | 180   | 8     | 2, ext. v.v.  |
|               |                  |                    | “ “ “                                 | “ “          | 3        | 180   | 8     | 4, 8, 10      |
| “             | 2429             | Fig'd.             | “ “ “                                 | “ “          | 3        | 180   | 8     | 5-7, 9        |
|               |                  |                    | “ “ “                                 | “ “          | 3        | 180   | 8     | 11-12a        |
|               |                  |                    | “ “ “                                 | St. G. N. Y. | 2        | ....  | 44    | 9, enl. × 3   |
|               |                  |                    | “ “ H. & C.                           | Pal. N. Y.   | 8, pt. 1 | ....  | 13    | 9, “ “        |
| “             | $\frac{2429}{3}$ | “                  | “ (Con.) Hall.                        | “ “          | 3        | 180   | 8     | 13, ext. v.v. |
|               |                  |                    | “ “ “                                 | “ “          | 3        | 180   | 8     | 15-16         |
|               |                  |                    | “ “ “                                 | “ “          | 3        | 180   | 16    | 1, 3          |
|               |                  |                    | “ “ “                                 | St. G. N. Y. | 2        | ....  | 44    | 10, 16        |
| “             | $\frac{2429}{1}$ | “                  | “ “ H. & C.                           | Pal. N. Y.   | 8, pt. 1 | ....  | 13    | 10, 16        |
|               |                  |                    | “ (Con.) Hall.                        | “ “          | 3        | 180   | 16    | 4c, prof.     |
|               |                  |                    | “ “ “                                 | “ “          | 3        | 180   | 16    | 5a, b, d      |
|               |                  |                    | “ “ “                                 | St. G. N. Y. | 2        | ....  | 44    | 21, 22        |
| “             | 2429             | “                  | “ “ H. & C.                           | Pal. N. Y.   | 8, pt. 1 | ....  | 13    | 21, 22        |
|               |                  |                    | “ (Con.) Hall.                        | “ “          | 3        | 180   | 16    | 8a, c         |
|               |                  |                    | “ “ “                                 | St. G. N. Y. | 2        | ....  | 44    | 7, 8, 11      |
|               |                  |                    | “ “ H. & C.                           | Pal. N. Y.   | 8, pt. 1 | ....  | 13    | 7, 8, 11      |



| LOCALITY.              | REMARKS.                                                                                                                                                                 |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                  | As <i>Leptocælia imbricata</i> .                                                                                                                                         |
| .....                  | " " " Orig. of fig. 10c is missing and fig. 13 is doubtful.                                                                                                              |
| Nr. Clarksville, N. Y. | Made type of genus. Seven entire individuals.                                                                                                                            |
| " " "                  | Entire.                                                                                                                                                                  |
| .....                  | As <i>Pentamerus ventricosus</i> .                                                                                                                                       |
| .....                  | " <i>P. (Pentamerella) ventricosus</i> .                                                                                                                                 |
| Waukesha, Wis.         | Internal cast, entire, perfect.                                                                                                                                          |
| Yellow Springs, O.     | As <i>P. (Pentamerella) ventricosus</i> . Internal cast of an average indiv.                                                                                             |
| Lockport, N. Y.        | As <i>Spirifer bilobus</i> . Three individuals.                                                                                                                          |
| Nr. Clarksville, N. Y. | " <i>Orthis varica</i> . Five entire individuals.                                                                                                                        |
| .....                  | " " "                                                                                                                                                                    |
| Nr. Clarksville, N. Y. | A very perfect adult.                                                                                                                                                    |
| .....                  | As <i>Orthis varica</i> .                                                                                                                                                |
| Nr. Clarksville, N. Y. | Two opposite, detached valves.                                                                                                                                           |
| .....                  | Considered a subgenus of <i>Strophodonta</i> , Pal. N. Y., vol. 8, pt. 1, p. 288.                                                                                        |
| Rochester, N. Y.       | As <i>Leptæna profunda</i> . Very large, much exfoliated ventral valve.                                                                                                  |
| .....                  | " " " ?                                                                                                                                                                  |
| .....                  | " <i>Strophodonta profunda</i> .                                                                                                                                         |
| Reynale's Basin, N. Y. | Ventral valve, imbedded. Young?                                                                                                                                          |
| .....                  | As <i>Strophodonta profunda</i> .                                                                                                                                        |
| .....                  | " " "                                                                                                                                                                    |
| Racine, Wis.           | Ext. imprint small ventral valve and int. imprint of large one.                                                                                                          |
| " "                    | Large internal cast. The fig. is not an enlargement.                                                                                                                     |
| .....                  | As <i>Strophodonta profunda</i> .                                                                                                                                        |
| .....                  | " " "                                                                                                                                                                    |
| Waldron, Ind.          | Large ventral valve, imbedded.                                                                                                                                           |
| " "                    | A fragmentary ventral valve.                                                                                                                                             |
| Schoharie, N. Y.       | As <i>Strophodonta varistriata</i> . A very small ventral valve in block with <i>Spirifer Vanuxemi</i> , fig. 18, same plate.                                            |
| " "                    | As <i>Strophodonta varistriata</i> . A small ventr. and two small dors. valves imbedded in block with many others and w. <i>Spirifer Vanuxemi</i> , fig. 19, same plate. |
| " "                    | As <i>Strophodonta varistriata</i> . Four ventr. valves; imb. separately.                                                                                                |
| .....                  | " " "                                                                                                                                                                    |
| .....                  | " " "                                                                                                                                                                    |
| Schoharie, N. Y.       | Two ventral valves showing interior; imbedded together.                                                                                                                  |
| " "                    | As <i>Strophodonta varistriata</i> . Somewhat crushed ventral valve; shows exterior; imbedded.                                                                           |
| " "                    | As <i>Strophodonta varistriata</i> . Two internal casts ventral valve with small portions of shell attached, imbedded.                                                   |
| .....                  | As <i>Strophodonta varistriata</i> .                                                                                                                                     |
| .....                  | " " "                                                                                                                                                                    |
| Litchfield, N. Y.      | A small and a medium-sized ventral valve, imbedded separately.                                                                                                           |
| Schoharie, N. Y.       | As <i>Strophodonta varistriata</i> . An imb. ventr. valve, partly exfoliated.                                                                                            |
| .....                  | " " "                                                                                                                                                                    |
| .....                  | " " " ?                                                                                                                                                                  |
| Schoharie, N. Y.       | Ventral valve, imbedded, partly exfoliated.                                                                                                                              |
| .....                  | As <i>Strophodonta varistriata</i> .                                                                                                                                     |
| .....                  | " " "                                                                                                                                                                    |
| Schoharie, N. Y.       | Two very perfect ventral valves, imbedded separately.                                                                                                                    |





| LOCALITY.              | REMARKS.                                                                                                                                    |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| .....                  | As <i>Strophodonta varistriata</i> .                                                                                                        |
| .....                  | “ “ “ “ “                                                                                                                                   |
| Schoharie, N. Y.       | A small indiv. and a vent. valve on same block. The former has been broken thro' from the ventral side so as to show the parts figured.     |
| .....                  | As <i>Strophodonta varistriata</i> , var. <i>arata</i> .                                                                                    |
| .....                  | “ “ “ “ “                                                                                                                                   |
| Nr. Hudson, N. Y.      | A very perfect ventral valve, imbedded.                                                                                                     |
| “ “ “                  | As <i>Strophodonta varistriata</i> , var. <i>arata</i> . Four vent. valves, imb.                                                            |
| .....                  | “ “ “ “ “                                                                                                                                   |
| Schoharie, N. Y.       | A small, perfect ventral valve, imbedded.                                                                                                   |
| .....                  | Synonym for <i>Merista</i> .                                                                                                                |
| .....                  | See <i>Merista elongata</i> .                                                                                                               |
| .....                  | “ “ <i>typus</i> .                                                                                                                          |
| New Hartford, N. Y.    | As <i>Atrypa æquiradiata</i> . External-internal casts of two vent. valves.                                                                 |
| Reynale's Basin, N. Y. | “ “ “ Two entire individuals.                                                                                                               |
| .....                  | As <i>Rhynchonella indianensis</i> .                                                                                                        |
| Waldron, Ind.          | “ “ “ Five individuals of progressive size.                                                                                                 |
| Reynale's Basin, N. Y. | “ <i>Atrypa neglecta</i> . Two entire individuals.                                                                                          |
| Lockport, N. Y.        | “ “ “ Six individ. ranging fr. very small to large.                                                                                         |
| Waldron, Ind.          | “ <i>Rhynchonella neglecta</i> . Two entire individuals.                                                                                    |
| Lockport, N. Y.        | “ <i>Atrypa</i> sp.? A crushed individual.                                                                                                  |
| Schoharie, N. Y.       | “ <i>Atrypa lamellata</i> , type. Individual of medium size.                                                                                |
| Lockport, N. Y.        | “ <i>Atrypa obtusiplicata</i> . An exfoliated individual.                                                                                   |
| “ “                    | “ “ “ Dorsal valve, compressed, imbedded.                                                                                                   |
| Schoharie, N. Y.       | “ <i>Rhynchonella semiplicata</i> . Nine individuals.                                                                                       |
| The Helderbergs, N. Y. | “ “ “ Two individuals.                                                                                                                      |
| .....                  | “ “ <i>sulcopicata</i> .                                                                                                                    |
| The Helderbergs, N. Y. | “ “ “ An entire individual.                                                                                                                 |
| .....                  | “ “ <i>Whitii</i> .                                                                                                                         |
| Waldron, Ind.          | “ “ “ Three entire adults.                                                                                                                  |
| .....                  | As <i>Strophomena cornuta</i> .                                                                                                             |
| Sodus Bay, N. Y.       | Two opposite valves imbedded in same block.                                                                                                 |
| “ “ “                  | A group and a ventral valve, each imbedded.                                                                                                 |
| .....                  | See <i>Chonetes undulatus</i> .                                                                                                             |
| Arisaig, N. S.         | Fig. combined from two individuals imbedded with <i>Trematospira simplex</i> , fig. 4, same page.                                           |
| Waldron, Ind.          | Three individuals of medium size, imbedded.                                                                                                 |
| Arisaig, N. S.         | Ventral valve, imbedded.                                                                                                                    |
| Waldron, Ind.          | As type of <i>Chonetes minimus</i> H. Name preoccupied. Individual attached to <i>Strophonella semifasciata</i> , fig. 1, pl. 22, same vol. |
| .....                  | As <i>Leptæna subquadrata</i> , type.                                                                                                       |
| .....                  | Made type of genus <i>Christiania</i> .                                                                                                     |
| Perry Co., Tenn.       | One dorsal and three ventral valves. All the figs. are enlargements.                                                                        |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR. | REFERENCE.   |                |       |       |           |
|---------------|------------------|--------------------|----------------------------|--------------|----------------|-------|-------|-----------|
|               |                  |                    |                            | Work.        | Vol.           | P.    | Pl.   | Figs.     |
| L. H.         | 2470             | Gen. and Sp. Type. | <b>Cœlospira</b> Hall.     |              |                |       |       |           |
|               |                  |                    | concava ..... Hall.        | N. Y. S. M.  | 10             | 107   | ....  | .....     |
|               |                  |                    | “ “ “                      | Pal. N. Y.   | 3              | 245   | 38    | 1, 3-6    |
|               |                  |                    | “ “ “                      | T. A. I.     | 4              | 146   | ....  | .....     |
|               |                  |                    | disparilis.....            | .....        | .....          | ..... | ..... | .....     |
| Cl.           | <u>1539</u><br>1 | Fig'd.             | hemispherica (Sow.) Hall.  | Pal. N. Y.   | 2              | 74    | 23    | 10a,c,f,g |
| “             | <u>1539</u><br>4 | “                  | “ “ “                      | “ “          | 2              | 74    | 23    | 10b, d.v. |
| “             | <u>1539</u><br>1 | “                  | “ “ “                      | “ “          | 2              | 74    | 23    | 10d       |
| “             | <u>1539</u><br>5 | “                  | “ “ “                      | “ “          | 2              | 74    | 23    | 10e, int. |
| “             | 1550             | Type.              | <b>Conchidium</b> Linn.    |              |                |       |       |           |
|               |                  |                    | georgiæ.. Hall & Clarke.   | “ “          | 8, pt. 2       | 369   | 66    | 18, 19    |
|               |                  |                    | “ “ Hall.                  | St. G. N. Y. | 14             | 367   | 11    | 10, 11    |
|               |                  |                    | Littoni ..... Hall.        | Pal. N. Y.   | 3              | 262   | ....  | .....     |
|               |                  |                    | occidentale..... Hall.     | “ “          | 2              | 341   | 79    | 1a-s      |
| “             | “                | Fig'd.             | “ ?..... “                 | “ “          | 2              | ....  | 79    | 2, int.   |
| Niag.         | 1927             | Type.              | <b>Crania</b> Retzius.     |              |                |       |       |           |
|               |                  |                    | acadiensis.....            | .....        | .....          | ..... | ..... | .....     |
|               |                  |                    | setifera..... Hall.        | T. A. I.     | 4              | 209   | ....  | .....     |
|               |                  |                    | “ “ H. & C.                | N. Y. S. M.  | 28             | 148   | 21    | 8-10      |
|               |                  |                    | “ “ “                      | St. G. N. Y. | 11             | ....  | 6     | 15, n.s.  |
| Niag.         | 1928             | Type.              | setigera.....              | Pal. N. Y.   | 8, pt. 1       | ....  | 4H    | 18, “     |
|               |                  |                    | siluriana ..... Hall.      | N. Y. S. M.  | 28,<br>1st ed. | ....  | 21    | .....     |
|               |                  |                    | “ “ “                      | T. A. I.     | 4              | 208   | ....  | .....     |
|               |                  |                    | “ “ “                      | N. Y. S. M.  | 28             | 148   | 21    | 3         |
|               |                  |                    | “ “ “                      | “ “          | 28             | 148   | 21    | 4, 5      |
| “             | “                | “                  | “ “ “                      | “ “          | 28             | 148   | 21    | 6         |
| “             | “                | “                  | “ “ “                      | “ “          | 28             | 148   | 21    | 7         |
| L. H.         | 2501             | Type.              | <b>Cryptonella</b> Hall.   |              |                |       |       |           |
|               |                  |                    | eximia ..... Hall.         | St. G. N. Y. | 13             | ....  | 52    | 18, enl.  |
|               |                  |                    | “ “ H. & C.                | Pal. N. Y.   | 8, pt. 2       | 286   | 80    | 11, 12    |
| Niag.         | 2059             | Type.              | <b>Cyrtia</b> Dalman.      |              |                |       |       |           |
|               |                  |                    | exporrecta ..... Wahl.     |              |                |       |       |           |
|               |                  |                    | var. arrecta.. H. & W.     | N. Y. S. M.  | 24             | 183   | ....  | .....     |
|               |                  |                    | “ “ Hall.                  | “ “          | 27             | ....  | 9     | 22, 23    |
|               |                  |                    | “ “ H. & C.                | St. G. N. Y. | 13             | ....  | 29    | 6, 7      |
| Niag.         | 2056             | Type.              | Dalmani.....               | Pal. N. Y.   | 8, pt. 2       | 42    | 28    | 2, 3      |
|               |                  |                    | meta..... Hall.            | N. Y. S. M.  | 20             | 372   | 13    | 12, 13    |
|               |                  |                    | “ “ “                      | “ “          | 20             | 372   | ....  | .....     |
|               |                  |                    | “ “ “                      | Pal. N. Y.   | 2              | ....  | 22    | 2s, t     |
|               |                  |                    | “ “ “                      | “ “          | 2              | ....  | 22    | 2c, d.v.  |
| L. H.         | 2448             | Type.              | <b>Cyrtina</b> Davidson.   |              |                |       |       |           |
|               |                  |                    | Dalmani ..... Hall.        | N. Y. S. M.  | 10             | 64    | ....  | .....     |
|               |                  |                    | “ “ “                      | Pal. N. Y.   | 3              | 206   | 24    | 2a-k, n-y |
|               |                  |                    | “ “ “                      | “ “          | 3              | 206   | 24    | 2l, d.v.  |
|               |                  |                    | “ “ “                      | “ “          | 3              | 206   | 24    | 2l, d.v.  |
| Niag.         | 1764             | Fig'd.             | <b>Dalmanella</b> H. & C.  |              |                |       |       |           |
|               |                  |                    | concinna ..... Hall.       | “ “          | 3              | 172   | 10A   | 2a-d      |
|               |                  |                    | “ “ “                      | “ “          | 3              | 172   | 10A   | 3a-c      |
|               |                  |                    | elegantula (Dalm.)... H.   | “ “          | 2              | 252   | 52    | 3b-h      |
|               |                  |                    | “ “ “                      | “ “          | 2              | 252   | 52    | 3i, k     |
| “             | <u>1764</u><br>2 | “                  | “ “ “                      | “ “          | 2              | 252   | 52    | 3l, m     |



| LOCALITY.            | REMARKS.                                                                   |
|----------------------|----------------------------------------------------------------------------|
| .....                | As <i>Leptocælia concava</i> .                                             |
| .....                | “ “ “                                                                      |
| TheHelderbergs, N.Y. | Made type of genus <i>Cælospira</i> . Five indiv. and a ventral valve.     |
| .....                | See <i>Atrypina disparilis</i> .                                           |
| Rochester, N. Y.     | As <i>Atrypa hemispherica</i> . A small and a large vent. valve, each imb. |
| Ontario, N. Y.       | “ “ “ Small dors. valve, imb. From Ridge Road.                             |
| Rochester, N. Y.     | “ “ “ A group of large and small indiv., imb.                              |
| New Hartford, N. Y.  | “ “ “ Internal cast large dorsal valve, imbedded.                          |
| .....                |                                                                            |
| Trenton, Ga.         | A large dorsal valve, imbedded.                                            |
| Tennessee.           | As <i>Pentamerus Littoni</i> . A somewhat imperfect adult.                 |
| Galt, Ont.           | “ “ “ Eleven internal casts, some of which re-                             |
| “ “                  | tain more or less exfoliated shell.                                        |
| .....                | As <i>Pentamerus occidentalis</i> . Small ventral valve. “ Perhaps a dis-  |
| .....                | tinguish species.”                                                         |
| .....                |                                                                            |
| .....                | See <i>Pholidops acadiensis</i> .                                          |
| .....                |                                                                            |
| .....                | As <i>Crania setigera</i> , by error, in the first edition of this report. |
| Waldron, Ind.        | A somewhat imperfect upper valve, imbedded.                                |
| .....                | Error for <i>C. setifera</i> , q. v.                                       |
| Waldron, Ind.        | An upper valve on a <i>Spirifer</i> .                                      |
| “ “                  | “ “ “ <i>Platyostoma niagarensis</i> .                                     |
| “ “                  | Four lower valves on a calyx of <i>Eucalyptocrinus crassus</i> .           |
| “ “                  | A lower valve on <i>Uncinulus Stricklandi</i> .                            |
| .....                |                                                                            |
| .....                | Referred to <i>Crytonella rectirostra</i> in expl. of plate, by error.     |
| TheHelderbergs, N.Y. | A somewhat crushed individual of medium size.                              |
| .....                | See <i>C. eximia</i> .                                                     |
| .....                |                                                                            |
| .....                |                                                                            |
| Louisville, Ky.      | Internal cast of an average individual.                                    |
| .....                | See <i>Cyrtina Dalmani</i> .                                               |
| Milwaukee, Wis.      | As <i>Spirifer meta</i> . Internal cast and exterior impr. of an individ.  |
| .....                | “ “ “                                                                      |
| Nr. Rochester, N. Y. | “ “ <i>radiatus</i> . Exfoliated ventral valve, imbedded.                  |
| Lockport, N. Y.      | “ “ “ A somewhat exfoliated individual.                                    |
| .....                |                                                                            |
| .....                | As <i>Cyrtia Dalmani</i> .                                                 |
| Clarksville, N. Y.   | “ “ “ Six entire indiv. ranging fr. very small to large.                   |
| Schoharie, N. Y.     | “ “ “ A very large dorsal valve, imbedded.                                 |
| .....                |                                                                            |
| Cumberland, Md.      | As <i>Orthis concinna</i> . A large individual.                            |
| “ “                  | “ “ “ Two detached opp. valves, somewhat broken.                           |
| Rochester, N. Y.     | “ “ <i>elegantula</i> . Three entire individuals.                          |
| “ “                  | “ “ “ Internal cast of adult ventral valve.                                |
| Lockport, N. Y.      | “ “ “ Young ventral valve. Fig. 3m is prob. an enl.                        |

## Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.              | REFERENCE.   |            |          |       |               |
|---------------|------------------|--------------------|-----------------------------------------|--------------|------------|----------|-------|---------------|
|               |                  |                    |                                         | Work.        | Vol.       | P.       | Pl.   | Figs.         |
| Niag.         | <u>1764</u><br>2 | Fig'd.             | <b>Dalmanella</b> H. & C.— <i>Cont.</i> | Pal. N. Y.   | 2          | 252      | 52    | 3n-r          |
| "             | <u>1764</u><br>3 | "                  | elegantula ( <i>Dalm.</i> )...H.        | N. Y. S. M.  | 28         | 150      | 21    | 11, 12        |
| "             | "                | "                  | " " " " H. & C.                         | St. G. N. Y. | 11         | ....     | 11    | 12, 13        |
| "             | "                | "                  | " " " " " " " " " " " "                 | Pal. N. Y.   | 8, pt. 1   | 207      | 5C    | 15, 16        |
| "             | "                | "                  | " " ( <i>Dalm.</i> ) Hall.              | N. Y. S. M.  | 28         | 150      | 21    | 13, v.v.      |
| "             | "                | "                  | " " " " " " " " " " " "                 | " " " "      | 28         | 150      | 21    | 14, 17        |
| "             | "                | "                  | " " " " " " " " " " " "                 | " " " "      | 28         | 150      | 21    | 15, 16        |
| "             | "                | "                  | " " " " " " " " " " " "                 | H. & C.      | Pal. N. Y. | 8, pt. 1 | 207   | 5C            |
| Cl.           | 1512             | Fig'd.             | " ? var....Hall.                        | Pal. N. Y.   | 2          | 57       | 20    | 7a, b         |
| "             | "                | "                  | " " " " " " " " " " " "                 | " " " "      | 2          | 57       | 20    | 7e, i, k      |
| "             | "                | "                  | " " " " " " " " " " " "                 | " " " "      | 2          | 57       | 20    | 7f, int.v.v.  |
| "             | "                | "                  | " " " " " " " " " " " "                 | " " " "      | 2          | 57       | 20    | 7g, h         |
| "             | "                | "                  | " " " " " " " " " " " "                 | " " " "      | 2          | 57       | 20    | 7e, ext.      |
| L. H.         | <u>2410</u><br>1 | Type.              | perelegans .....Hall.                   | N. Y. S. M.  | 10         | 44       | ....  | .....         |
| "             | "                | "                  | " " " " " " " " " " " "                 | Pal. N. Y.   | 3          | 171      | 13    | 4-8           |
| "             | "                | "                  | " " " " " " " " " " " "                 | " " " "      | 3          | 171      | 13    | 9a, b         |
| "             | "                | "                  | " " " " " " " " " " " "                 | " " " "      | 3          | 171      | 13    | 10a-d         |
| "             | "                | "                  | " " " " " " " " " " " "                 | H. & C.      | " " " "    | 8, pt. 1 | 207   | 5C            |
| "             | "                | "                  | " " " " " " " " " " " "                 | " " " "      | 3          | 171      | 13    | 34, 35        |
| "             | <u>2410</u><br>3 | "                  | " " " " " " " " " " " "                 | " " " "      | 3          | 171      | 13    | 11a-c, 12a    |
| "             | "                | "                  | " " " " " " " " " " " "                 | " " " "      | 3          | 171      | 13    | 12b, int.d.v. |
| "             | 2419             | "                  | planoconvexa .....Hall.                 | " " " "      | 3          | 168      | 12    | 2, 3          |
| "             | <u>2411</u><br>1 | "                  | subcarinata .....Hall.                  | N. Y. S. M.  | 10         | 43       | ....  | .....         |
| "             | "                | "                  | " " " " " " " " " " " "                 | Pal. N. Y.   | 3          | 169      | 12    | 7, 8, 13-17   |
| "             | "                | "                  | " " " " " " " " " " " "                 | St. G. N. Y. | 2          | ....     | 35    | 23-26         |
| "             | "                | "                  | " " " " " " " " " " " "                 | H. & C.      | " " " "    | 11       | ....  | 11            |
| "             | "                | "                  | " " " " " " " " " " " "                 | " " " "      | 8, pt. 1   | 207      | 5C    | 15-17         |
| "             | "                | "                  | " " " " " " " " " " " "                 | Pal. N. Y.   | 3          | 169      | 12    | 25-28         |
| "             | "                | "                  | " " " " " " " " " " " "                 | " " " "      | 3          | 169      | 12    | 18, 19        |
| "             | "                | "                  | " " " " " " " " " " " "                 | St. G. N. Y. | 2          | ....     | 35    | 27-29         |
| "             | "                | "                  | " " " " " " " " " " " "                 | H. & C.      | " " " "    | 11       | ....  | 11            |
| "             | "                | "                  | " " " " " " " " " " " "                 | " " " "      | 8, pt. 1   | 207      | 5C    | 8             |
| "             | "                | "                  | " " " " " " " " " " " "                 | Pal. N. Y.   | 3          | 169      | 12    | 29, 30, 33    |
| "             | "                | "                  | " " " " " " " " " " " "                 | " " " "      | 3          | 169      | 12    | 20, 21        |
| "             | "                | "                  | " " " " " " " " " " " "                 | St. G. N. Y. | 2          | ....     | 35    | 30, 31        |
| "             | "                | "                  | " " " " " " " " " " " "                 | H. & C.      | " " " "    | 11       | ....  | 11            |
| "             | "                | "                  | " " " " " " " " " " " "                 | " " " "      | 8, pt. 1   | 207      | 5C    | 14            |
| "             | "                | "                  | " " " " " " " " " " " "                 | Pal. N. Y.   | 3          | 170      | 12    | 31, 32        |
| "             | "                | "                  | " var. quadrans H.                      | " " " "      | 3          | 170      | 12    | 9-12          |
| Cl.           | 1514             | Fig'd.             | testudinaria ( <i>Dalm.</i> ) H.        | " " " "      | 2          | 58       | 20    | 9a, int.d.v.  |
|               |                  |                    | <i>Delthyris</i> Dalman.                | .....        | .....      | .....    | ..... | .....         |
|               |                  |                    | <i>decemplicata</i> .....               | .....        | .....      | .....    | ..... | .....         |
| Cl.           | <u>1509</u><br>2 | Type.              | <b>Dignomia</b> Hall.                   | Pal. N. Y.   | 2          | 54       | 20    | 2a, b         |
| "             | "                | "                  | oblata.....Hall.                        | " " " "      | 2          | 54       | 20    | 2c, int.      |
|               |                  |                    | " " " " " " " " " " " "                 | " " " "      | 2          | 54       | 20    | 2c, int.      |
| Niag.         | <u>2050</u><br>1 | Gen. and Sp. Type. | <b>Dinobolus</b> Hall.                  | N. Y. S. M.  | 20         | 368      | ....  | .....         |
|               |                  |                    | Conradi .....Hall.                      | " " " "      | 33         | 247      | ....  | .....         |
|               |                  |                    | " " " " " " " " " " " "                 | Pal. N. Y.   | 8, pt. 1   | 38       | 4B    | 14, 18        |
| Cl.           | 1628             | Type.              | <b>Discina</b> Lamarck.                 | .....        | .....      | .....    | ..... | .....         |
|               |                  |                    | <i>Conradi</i> .....                    | .....        | .....      | .....    | ..... | .....         |
|               |                  |                    | tenuilamellata,                         | .....        | .....      | .....    | ..... | .....         |
|               |                  |                    | var. subplana...H.                      | C. N. & G.   | 5          | 144      | ....  | .....         |
|               |                  |                    | <i>Vanuxemi</i> .....                   | .....        | .....      | .....    | ..... | .....         |



| LOCALITY.                                                              | REMARKS.                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lockport, N. Y.<br>.....                                               | As <i>Orthis elegantula</i> . Two dorsal valves showing interior.<br>" " " "                                                                                                                                                                                                                                                         |
| Waldron, Ind.<br>" "<br>" "                                            | A small individual, entire, very perfect.<br>As <i>Orthis elegantula</i> . A large ventral valve, imbedded.<br>" " " " A rather large individual.<br>" " " "                                                                                                                                                                         |
| Waldron, Ind.<br>Sodus, N. Y.<br>" "<br>" "<br>" "<br>" "              | Two opposite valves showing interior.<br>As <i>Orthis elegantula</i> ? var. Rather small indiv., somewhat crusted.<br>" " " " Large vent. valve, partly exfoliated, imb.<br>" " " " Internal cast, ventral valve.<br>" " " " Ventral valve, partly exfoliated.<br>" " " " Small ventral valve, imperfect.<br>" " <i>perelegans</i> . |
| Clarksville, N. Y.<br>" "                                              | " " " " Ten entire individuals.<br>" " " " Two large ventral valves.<br>" " " "                                                                                                                                                                                                                                                      |
| Clarksville, N. Y.<br>" "                                              | A very perf. dors. valve of med. size, and two others nearly entire.<br>As <i>Orthis perelegans</i> . Three nearly entire internal casts.                                                                                                                                                                                            |
| Catskill Creek, N. Y.<br>Clarksville, N. Y.<br>.....<br>.....<br>..... | " " " " Internal cast dorsal valve, imbedded.<br>" " <i>planoconvexa</i> . Two entire individuals.<br>" " <i>subcarinata</i> .<br>" " " "<br>" " " "                                                                                                                                                                                 |
| Nr. Clarksville, N. Y.<br>.....<br>.....                               | Eight entire individuals from very small to adult.<br>As <i>Orthis subcarinata</i> .<br>" " " "                                                                                                                                                                                                                                      |
| Nr. Clarksville, N. Y.<br>.....<br>.....                               | Two large, opposite valves, detached.<br>As <i>Orthis subcarinata</i> .<br>" " " "                                                                                                                                                                                                                                                   |
| Nr. Clarksville, N. Y.<br>" " " "                                      | Two entire internal casts showing vascular markings.<br>As <i>Orthis subcarinata</i> , var. <i>quadrans</i> . Two entire individuals and two detached valves.                                                                                                                                                                        |
| New Hartford, N. Y.<br>.....<br>.....                                  | As type of <i>Orthis tenuidens</i> Hall. Int. cast of dorsal valve, imb.<br><br>Synonym of <i>Spirifer</i> .<br>See <i>Spirifer sulcatus</i> .                                                                                                                                                                                       |
| { Wolcott or }<br>{ Sodus, N. Y. }                                     | As <i>Lingula oblata</i> . Imperfect individual, imbedded.<br>" " " " Ext.-int. impr. of dors.? valve ; margin broken.                                                                                                                                                                                                               |
| .....<br>.....<br>Racine, Wis.                                         | As <i>Obolus Conradi</i> .<br>Made generic type.<br>Two internal casts. Locality incorrect in explanation of the plate.                                                                                                                                                                                                              |
| .....                                                                  | See <i>Orbiculoidea Conradi</i> .                                                                                                                                                                                                                                                                                                    |
| Arisaig, N. S.<br>.....                                                | [ <i>erectus</i> , fig. 8, p. 149.<br>Ext.-int. impr. dors.? valve ; imbedded with type of <i>Clidophorus</i><br>See <i>Orbiculoidea Vanuxemi</i> .                                                                                                                                                                                  |

Class BRACHIOPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No. | Type or<br>Fig'd Sp.         | GENUS, SPECIES AND AUTHOR.         | REFERENCE.   |          |       |        |                        |
|------------------|-------------|------------------------------|------------------------------------|--------------|----------|-------|--------|------------------------|
|                  |             |                              |                                    | Work.        | Vol.     | P.    | Pl.    | Figs.                  |
| L. H.            | 2494        | Type.                        | <b>Eatonia</b> Hall.               |              |          |       |        |                        |
|                  |             |                              | eminens .....Hall.                 | N. Y. S. M.  | 10       | 92    |        |                        |
|                  | 2493<br>1   | Fig'd Sp.<br>and<br>Gen.Type | "                                  | Pal. N. Y.   | 3        | 242   | 37     | 2a-c                   |
|                  |             |                              | medialis ( <i>Vanuxem</i> ) H.     | N. Y. S. M.  | 10       | 90    | ....   | .....                  |
|                  |             |                              | "                                  | Pal. N. Y.   | 3        | 241   | 37     | 1a-u                   |
|                  | 2493        | Fig'd.                       | " " H. & C.                        | " "          | 8, pt. 2 | 205   | 61     | 31, <i>frt.</i>        |
|                  | 2496        |                              | " " Hall.                          | " "          | 3        | 241   | 37     | 1y, <i>v.v.</i>        |
|                  | 2496        |                              | peculiaris ( <i>Con.</i> )...Hall. | " "          | 3        | 244   | 38     | 21, 23, 24             |
|                  | 2496        | "                            | " " "                              | " "          | 3        | 244   | 38     | 22a, b                 |
|                  | 2496        |                              | " " H. & C.                        | " "          | 8, pt. 2 | 206   | 61     | 17,<br><i>ext.d.v.</i> |
|                  | 2496        |                              | " " Hall.                          | " "          | 3        | 244   | 38     | 25a, b                 |
|                  | 2495        | "                            | singularis ( <i>Vanux.</i> )...H.  | " "          | 3        | 243   | 38     | 14-16,<br>18, 20       |
|                  | 2495        |                              | " " H. & C.                        | St. G. N. Y. | 13       | ....  | 44     | 35, <i>v.v.</i>        |
|                  | 2495        |                              | " " Hall.                          | Pal. N. Y.   | 8, pt. 2 | 206   | 61     | 13, "                  |
|                  | 2495        | "                            | " " H. & C.                        | " "          | 3        | 243   | 38     | 17a-d                  |
|                  | 2495        |                              | " " H. & C.                        | St. G. N. Y. | 13       | ....  | 44     | 36, 37                 |
|                  | 2495        |                              | " " Hall.                          | Pal. N. Y.   | 8, pt. 2 | 206   | 61     | 14-16                  |
|                  | 2495        | "                            | " " "                              | " "          | 3        | 243   | 38     | 19a, b                 |
| Niag. ?          | 2203        | Type.                        | <b>Eichwaldia</b> Billings.        |              |          |       |        |                        |
|                  |             |                              | concinna .....Hall.                | N. Y. S. M.  | 20       | 278   |        |                        |
|                  | 1790<br>1   | "                            | " H. & C.                          | St. G. N. Y. | 13       | ....  | 54     | 17, <i>d.v.</i>        |
|                  |             |                              | "                                  | Pal. N. Y.   | 8, pt. 2 | 310   | 83     | 5, "                   |
|                  |             |                              | coralifera.....Hall.               | " "          | 2        | 281   | 58     | 5a-m, r, s             |
|                  | 1790        | "                            | " " "                              | " "          | 2        | 281   | 58     | 5n-p                   |
|                  | 2202        | "                            | gibbosa .....Hall.                 | N. Y. S. M.  | 20       | 278   |        |                        |
|                  |             |                              | " H. & C.                          | St. G. N. Y. | 13       | ....  | 54     | 18, <i>d.v.</i>        |
|                  |             |                              | "                                  | Pal. N. Y.   | 8, pt. 2 | 310   | 83     | 6, 7                   |
|                  | I944        | "                            | reticulata .....Hall.              | T. A. I.     | 4        | 217   | ....   | .....                  |
|                  |             |                              | " " "                              | N. Y. S. M.  | 28       | 169   | 26     | 50, 52                 |
|                  |             |                              | " " "                              | " "          | 20       | 275   | ....   | 1, 2, 3                |
|                  | "           | "                            | " " "                              | " "          | 28       | 169   | 26     | 51, 53, 54             |
|                  |             |                              | " " H. & C.                        | St. G. N. Y. | 13       | ....  | 54     | 13                     |
|                  |             |                              | " " "                              | Pal. N. Y.   | 8, pt. 2 | 310   | 83     | 10, 11                 |
|                  | I777        | "                            | <b>Homœospira</b> H. & C.          | .....        | .....    | ..... | .....  | .....                  |
|                  |             |                              | apriniformis .....Hall.            | Pal. N. Y.   | 3        | 485   | ....   | .....                  |
|                  |             |                              | " H. & C.                          | St. G. N. Y. | 13       | ....  | 36     | 17, 18                 |
|                  | I938        | Gen. and<br>Sp. Type.        | "                                  | Pal. N. Y.   | 8, pt. 2 | 112   | 83     | 24, 25                 |
|                  |             |                              | evax .....Hall.                    | T. A. I.     | 4        | 213   | ....   | .....                  |
|                  |             |                              | " " "                              | N. Y. S. M.  | 28       | 160   | 25     | 14, 18-20              |
|                  | "           | "                            | " Hall & Clarke.                   | St. G. N. Y. | 13       | ....  | 36     | 13, 14                 |
|                  |             |                              | " " "                              | Pal. N. Y.   | 8, pt. 2 | 111   | 50     | 16, 17                 |
|                  |             |                              | " " Hall.                          | N. Y. S. M.  | 28       | 160   | 25     | 13, 15-17, 21          |
| Niag.            | 1520<br>6   | Fig'd.                       | <b>Leptæna</b> Dalman.             |              |          |       |        |                        |
|                  |             |                              | <i>conca</i> va .....              | .....        | .....    | ..... | .....  | .....                  |
|                  |             |                              | <i>corrugata</i> .....             | .....        | .....    | ..... | .....  | .....                  |
|                  |             |                              | <i>depressa</i> .....              | .....        | .....    | ..... | .....  | .....                  |
|                  |             |                              | <i>obscura</i> .....               | .....        | .....    | ..... | .....  | .....                  |
|                  |             |                              | <i>orthididea</i> .....            | .....        | .....    | ..... | .....  | .....                  |
|                  |             |                              | <i>patenta</i> .....               | .....        | .....    | ..... | .....  | .....                  |
|                  |             |                              | <i>profunda</i> .....              | .....        | .....    | ..... | .....  | .....                  |
|                  |             |                              | rhomboidalis ( <i>Wilck.</i> )H.   | Geol. N. Y.  | 4th D.   | 104   | ct. 35 | 2, <i>v.v.</i>         |
|                  |             |                              | " " "                              | Pal. N. Y.   | 2        | 257   | 53     | 6e                     |
| Cl.              | 1520<br>1   | "                            | " " "                              | " "          | 2        | 62    | 21     | 8, <i>v.v.</i>         |



| LOCALITY.             | REMARKS.                                                                                              |
|-----------------------|-------------------------------------------------------------------------------------------------------|
| Tennessee.            | Large internal cast, entire.                                                                          |
| .....                 | Gen. name used here, but descr. in full in Pal. N. Y., III., 432.                                     |
| TheHelderbergs, N.Y.  | Nine entire individuals and one entire internal cast.                                                 |
| Catskill Creek, N. Y. | Internal cast, imbedded.                                                                              |
| Hudson, N. Y.         | Four entire individuals, two of which are imbedded. Doubtful whether original of fig. 23b is present. |
| Albany Co., N. Y.     | Large individual, imbedded.                                                                           |
| Clarksville, N. Y.    | Internal cast, medium size.                                                                           |
| Clarksville, N. Y.    | Four entire individuals, one of which is unusually large.                                             |
| Hudson, N. Y.         | A nearly perfect individual of average size.                                                          |
| TheHelderbergs, N.Y.  | One entire internal cast and one preserving about half of shell.                                      |
| Perry Co., Tenn.      | Individual preserving much of shell. From "the Glades."                                               |
| Lockport, N. Y.       | As <i>Atrypa corallifera</i> . Five individuals of progressive size.                                  |
| Rochester, N. Y.      | " " " Three internal casts, imbedded.                                                                 |
| Perry Co., Tenn.      | Individual preserving shell. From "the Glades."                                                       |
| .....                 | As <i>Rhynchonella? reticulata</i> .                                                                  |
| Waldron, Ind.         | Small entire individual and large partly exfoliated one.                                              |
| " "                   | A very perfect individual of medium size.                                                             |
| .....                 | Defined as a subgenus of <i>Rhynchospira</i> .                                                        |
| .....                 | As <i>Rhynchospira apriniformis</i> .                                                                 |
| Cumberland, Md.       | Entire, adult. Probably = <i>H. aprinis</i> de Verneuil.                                              |
| .....                 | As <i>Rhynchospira evax</i> .                                                                         |
| .....                 | " <i>Retzia evax</i> .                                                                                |
| Waldron, Ind.         | A full grown, very perfect individual.                                                                |
| " "                   | As <i>Retzia evax</i> . Five individuals of progressive size.                                         |
| .....                 | See <i>Leptænisca concava</i> .                                                                       |
| .....                 | " <i>Amphistrophia corrugata</i> .                                                                    |
| .....                 | " <i>Leptæna rhomboidalis</i> .                                                                       |
| .....                 | " <i>Rafinesquina obscura</i> and <i>Orthotheses subplanus</i> .                                      |
| .....                 | " <i>Stropheodonta orthididea</i> .                                                                   |
| .....                 | " <i>Strophonella patenta</i> .                                                                       |
| .....                 | " <i>Brachyprion profundum</i> .                                                                      |
| .....                 | As <i>Strophomena depressa</i> Sowerby.                                                               |
| Rochester, N. Y.      | " <i>Leptæna depressa</i> Sowerby. An average adult, imbedded.                                        |
| Kirkland, N. Y.       | " " " Internal cast small ventral valve.                                                              |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.             | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                                             | REFERENCE.   |          |       |        |                         |
|---------------|----------------------|--------------------|----------------------------------------------------------------------------------------|--------------|----------|-------|--------|-------------------------|
|               |                      |                    |                                                                                        | Work.        | Vol.     | P.    | Pl.    | Figs.                   |
| Niag.         | <u>1520</u><br>4     | Fig'd.             | <b>Leptæna</b> Dalman— <i>Cont.</i><br><i>rhomboidalis</i> ( <i>Wilck.</i> ) <i>H.</i> | Pal. N. Y.   | 2        | 257   | 53     | 6a-d                    |
| "             | <u>1520</u><br>6     | "                  | " " " "                                                                                | " "          | 2        | 257   | 53     | 6f,<br><i>ext. v.v.</i> |
| "             | <u>1520</u><br>4     | "                  | " " " "                                                                                | " "          | 2        | 257   | 53     | 6i,<br><i>int. d.v.</i> |
| "             | <u>1520</u><br>6     | "                  | " " " "                                                                                | " "          | 2        | 257   | 53     | 6k, <i>enl.</i>         |
| L. H.         | <u>1520</u><br>13&15 | "                  | " " " "                                                                                | " "          | 3        | 195   | 19     | 1a-k                    |
|               |                      |                    | " " " "                                                                                | St. G. N. Y. | 2        | ....  | 38     | 20-23                   |
|               |                      |                    | <i>H. &amp; C.</i>                                                                     | " "          | II       | ....  | 13     | 3                       |
|               |                      |                    | " " " "                                                                                | Pal. N. Y.   | 8, pt. I | 279   | 8      | 20-23                   |
| "             | <u>1520</u><br>13    | "                  | " ( <i>Wilck.</i> ) <i>H.</i>                                                          | " "          | 3        | 195   | 19     | 1l, <i>int.</i>         |
| "             | <u>1520</u><br>16    | "                  | " " " "                                                                                | " "          | 3        | 195   | 19     | 1m, "                   |
| "             | <u>1520</u><br>15    | "                  | " " " "                                                                                | " "          | 3        | 195   | 19     | 1n, "                   |
|               |                      |                    | " " " "                                                                                | St. G. N. Y. | 2        | ....  | 38     | 24, "                   |
|               |                      |                    | <i>H. &amp; C.</i>                                                                     | " "          | II       | ....  | 13     | 6, "                    |
|               |                      |                    | " " " "                                                                                | Pal. N. Y.   | 8, pt. I | 279   | 8      | 24, "                   |
| "             | <u>1520</u><br>14    | "                  | " ( <i>Wilck.</i> ) <i>H.</i>                                                          | " "          | 3        | 195   | 19     | 1o-qt                   |
| "             | <u>1520</u><br>13    | "                  | " " " "                                                                                | " "          | 3        | 195   | 19     | 1r, s                   |
| "             | "                    | "                  | " " " "                                                                                | " "          | 3        | 195   | 19     | 1t, <i>int.</i>         |
|               |                      |                    | " " " "                                                                                | St. G. N. Y. | 2        | ....  | 38     | 25, "                   |
|               |                      |                    | <i>H. &amp; C.</i>                                                                     | " "          | II       | ....  | 13     | 7, "                    |
|               |                      |                    | " " " "                                                                                | Pal. N. Y.   | 8, pt. I | 279   | 8      | 25, "                   |
| "             | <u>1520</u><br>17    | "                  | " ( <i>Wilck.</i> ) <i>H.</i>                                                          | " "          | 3        | 195   | 19     | 1u-y                    |
| "             | <u>1520</u><br>16    | "                  | " " " "                                                                                | " "          | 3        | 195   | 19     | 2, <i>v.v.</i>          |
| Niag.         | <u>1520</u><br>7     | "                  | " " " "                                                                                | N. Y. S. M.  | 28       | 151   | 22     | 4, <i>int.</i>          |
| "             | "                    | "                  | " " " "                                                                                | " "          | 28       | 151   | 22     | 5-8, 10                 |
| "             | "                    | "                  | " " " "                                                                                | " "          | 28       | 151   | 22     | 9, <i>int.</i>          |
|               |                      |                    | " " " "                                                                                | St. G. N. Y. | 2        | ....  | 38     | 18, 19                  |
|               |                      |                    | <i>H. &amp; C.</i>                                                                     | " "          | II       | ....  | 13     | 4, <i>card.</i>         |
|               |                      |                    | " " " "                                                                                | Pal. N. Y.   | 8, pt. I | 279   | 8      | 18, 19                  |
|               |                      |                    | <i>sericea</i> .....                                                                   | .....        | .....    | ..... | .....  | .....                   |
|               |                      |                    | <i>striata</i> .....                                                                   | .....        | .....    | ..... | .....  | .....                   |
|               |                      |                    | <i>subplana</i> .....                                                                  | .....        | .....    | ..... | .....  | .....                   |
|               |                      |                    | <i>subquadrata</i> .....                                                               | .....        | .....    | ..... | .....  | .....                   |
|               |                      |                    | <i>transversalis</i> .....                                                             | .....        | .....    | ..... | .....  | .....                   |
|               |                      |                    | <b>Leptænisca</b> Beecher.                                                             |              |          |       |        |                         |
| L. H.         | <u>2439</u><br>1     | Gen. and Sp. Type. | <i>concava</i> ..... <i>Hall.</i>                                                      | St. G. N. Y. | 2        | ....  | 46     | 30, 31                  |
|               |                      |                    | <i>Beecher.</i>                                                                        | Am. J. S.    | III, 40  | 238   | ....   | .....                   |
|               |                      |                    | <i>H. &amp; C.</i>                                                                     | Pal. N. Y.   | 8, pt. I | 300   | 15     | 30, 31                  |
|               |                      |                    | <b>Leptocoelia</b> Hall.                                                               |              |          |       |        |                         |
|               |                      |                    | <i>concava</i> .....                                                                   | .....        | .....    | ..... | .....  | .....                   |
|               |                      |                    | <i>imbricata</i> .....                                                                 | .....        | .....    | ..... | .....  | .....                   |
| Cl.           | 1634                 | Type.              | <i>intermedia</i> ..... <i>Hall.</i>                                                   | C. N. & G.   | 5        | 147   | p. 144 | 5, <i>v.v. x 2</i>      |
|               |                      |                    | <b>Leptostrophia</b> H. & C.                                                           |              |          |       |        |                         |
| L. H.         | <u>2431</u><br>2     | "                  | <i>Becki</i> ..... <i>Hall.</i>                                                        | N. Y. S. M.  | 10       | 52    | ....   | .....                   |
| "             | <u>2431</u><br>3     | "                  | " " " "                                                                                | Pal. N. Y.   | 3        | 191   | 22     | 1a, <i>ext.</i>         |
| "             | <u>2431</u><br>4     | "                  | " " " "                                                                                | " "          | 3        | 191   | 22     | 1b, "                   |
| "             | <u>2431</u><br>1     | "                  | " " " "                                                                                | " "          | 3        | 191   | 22     | 1c, d                   |
| "             | "                    | "                  | " " " "                                                                                | " "          | 3        | 191   | 22     | 1e, i                   |
| "             | "                    | "                  | " " " "                                                                                | " "          | 3        | 191   | 22     | 1f-h                    |
|               |                      |                    | " " " "                                                                                | St. G. N. Y. | 2        | ....  | 44     | 24,<br><i>ext. d.v.</i> |
|               |                      |                    | <i>H. &amp; C.</i>                                                                     | Pal. N. Y.   | 8, pt. I | 288   | 13     | 24,<br><i>ext. d.v.</i> |
| "             | "                    | "                  | " " " " <i>Hall.</i>                                                                   | " "          | 3        | 191   | 22     | 1k, l, r                |



| LOCALITY.                                     | REMARKS.                                                                                  |
|-----------------------------------------------|-------------------------------------------------------------------------------------------|
| Lockport, N. Y.                               | As <i>Leptæna depressa</i> Sowerby. Three individuals, nearly entire.                     |
| Rochester, N. Y.                              | " " " Very large ventral valve, exfoliated, imbedded.                                     |
| Lockport, N. Y.                               | " " " Nearly entire dorsal valve, imbedded.                                               |
| Rochester, N. Y.                              | " " " Rather small dorsal valve.                                                          |
| .....                                         | " <i>Strophomena rugosa</i> Hisinger.                                                     |
| .....                                         | " <i>S. rhomboidalis</i> .                                                                |
| { Albany and Scho- }<br>{ harie Cos., N. Y. } | Five entire individuals and a large, imbedded, dorsal valve.                              |
| Clarksville, N. Y.                            | As <i>Strophomena rugosa</i> His. Dorsal valve, imbedded.                                 |
| Schoharie, N. Y.                              | " " " " " " "                                                                             |
| .....                                         | " " " " "                                                                                 |
| .....                                         | " <i>S. rhomboidalis</i> .                                                                |
| Helderberg Mts., N.Y.                         | A large, somewhat broken dorsal valve, imbedded.                                          |
| Near Hudson, N. Y.                            | As <i>Strophomena rugosa</i> . Three internal casts dorsal valves.                        |
| Clarksville, N. Y.                            | " " " Two ventral valves.                                                                 |
| .....                                         | " " " "                                                                                   |
| .....                                         | " <i>S. rhomboidalis</i> .                                                                |
| Clarksville, N. Y.                            | A somewhat broken ventral valve.                                                          |
| Near Hudson, N. Y.                            | As <i>Strophomena rugosa</i> . Three internal casts of ventral valves.                    |
| Schoharie, N. Y.                              | " " " Exfoliated ventral valve.                                                           |
| Waldron, Ind.                                 | " <i>Strophomena rhomboidalis</i> . Ventr. valve of med. size, imbedded.                  |
| " "                                           | " " " Three entire adults.                                                                |
| .....                                         | " " " "                                                                                   |
| .....                                         | " " " "                                                                                   |
| Waldron, Ind.                                 | A nearly entire, dorsal valve, imbedded.                                                  |
| .....                                         | See <i>Plectambonites sericeus</i> .                                                      |
| .....                                         | " <i>Amphistrophia striata</i> .                                                          |
| .....                                         | " <i>Orthothes subplanus</i> .                                                            |
| .....                                         | " <i>Christiania subquadrata</i> .                                                        |
| .....                                         | " <i>Plectambonites transversalis</i> .                                                   |
| .....                                         | As <i>Leptæna</i> ? (Subgenus ?) <i>concava</i> .                                         |
| .....                                         | Made type of new genus <i>Leptænisca</i> .                                                |
| Nr. Clarksville, N. Y.                        | Two ventral valves, both of which were used for second figure.                            |
| .....                                         | See <i>Cælospira concava</i> .                                                            |
| .....                                         | " <i>Atrypina imbricata</i> .                                                             |
| Arisaig, N. S.                                | Exterior imprint of a small ventral valve.                                                |
| .....                                         | As <i>Strophomena</i> ( <i>Strophodonta</i> ) <i>Becki</i> .                              |
| Near Hudson, N. Y.                            | " <i>Strophodonta Becki</i> . Small ventral valve, imbedded.                              |
| Columbia, N. Y.                               | " " " Ventral valve, imbedded.                                                            |
| Helderberg Mts., N.Y.                         | " " " Two ventral valves, imbedded.                                                       |
| Schoharie, N. Y.                              | " " " Two old, much corrugated ventral valves.                                            |
| .....                                         | " " " "                                                                                   |
| .....                                         | " " " "                                                                                   |
| Schoharie, N. Y.                              | As <i>Stropheodonta Leptostrophia</i> ( <i>Becki</i> ). Nearly entire adult med. size.    |
| " "                                           | As <i>Strophodonta Becki</i> . Three ventral valves. Fig. 11 was made from two specimens. |

Class BRACHIOPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No. | Type or<br>Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.       | REFERENCE.   |          |       |        |                               |
|------------------|-------------|-----------------------|----------------------------------|--------------|----------|-------|--------|-------------------------------|
|                  |             |                       |                                  | Work.        | Vol.     | P.    | Pl.    | Figs.                         |
| L. H.            | 2431        | Type.                 | <b>Leptostrophia</b> H.&C.-Cont. |              |          |       |        |                               |
| "                | "           | "                     | Becki.....Hall.                  | Pal. N. Y.   | 3        | 191   | 22     | 1m, s, t                      |
| "                | "           | "                     | "....."                          | " "          | 3        | 191   | 23     | 3, int.                       |
| "                | "           | "                     | "....."                          | St. G. N. Y. | 2        | ....  | 44     | <sup>23</sup> ,<br>int. v. v. |
|                  |             |                       | H. & C.                          | Pal. N. Y.   | 8, pt. 1 | 288   | 13     | <sup>23</sup> ,<br>int. v. v. |
|                  |             |                       | <b>Lingula</b> Bruguière.        |              |          |       |        |                               |
| "                | 2403        | "                     | centrilineata.....Hall.          | " "          | 3        | 155   | 9      | 1, 2                          |
| Cl.              | 1510        | Fig'd.                | Clintoni ( <i>Vanux.</i> )....H. | " "          | 2        | 54    | 20     | 1b, d? v.                     |
| Med.             | 1427        | "                     | cuneata ( <i>Con.</i> ).....H.   | Geol. N. Y.  | 4th D.   | 48    | ct. 6  | 5                             |
| "                | 1427        | "                     | "....."                          | " "          | "        | 52    | ct. 10 | 1, n.s.                       |
|                  | 2           |                       | "....."                          | Pal. N. Y.   | 2        | 8     | 4      | 2e, n.s.                      |
| Niag.            | 1507        | Type.                 | lamellata.....Hall.              | Geol. N. Y.  | 4th D.   | 109   | ct. 38 | 2, v. v.                      |
|                  | 2           |                       | "                                | Pal. N. Y.   | 2        | 249   | 53     | 1, 2                          |
|                  |             |                       | lamellata.....                   | " "          | 2        | ....  | 20     | 4a, b                         |
|                  |             |                       | oblata.....                      | .....        | .....    | ..... | .....  | .....                         |
|                  |             |                       | oblonga Conrad.....              | .....        | .....    | ..... | .....  | .....                         |
| L. H.            | 2402        | Type.                 | perlata.....Hall.                | Pal. N. Y.   | 3        | 156   | 9      | 3, 4                          |
| "                | 2402        | "                     | "....."                          | " "          | 3        | 156   | 9      | 5, 5a                         |
| Cl.              | 1508        | "                     | perovata.....Hall.               | " "          | 2        | 55    | 20     | 3a, b                         |
| L. H.            | 2406        | "                     | rectilatera.....Hall.            | " "          | 3        | 156   | 9      | 6, ext.                       |
| "                | 2406        | "                     | "....."                          | " "          | 3        | 156   | 9      | 8                             |
| "                | 2404        | "                     | spathata.....Hall                | " "          | 3        | 157   | 9      | 7, 11                         |
| "                | 2404        | "                     | "....."                          | " "          | 3        | 157   | 9      | 9                             |
| "                | 2405        | "                     | spatiosa.....Hall.               | " "          | 3        | 158   | 9      | 10, 10a                       |
| Cl.              | 1507        | "                     | tæniola.....H. & C.              | " "          | 8, pt. 1 | 18    | 4K     | 8, enl. × 1.5                 |
|                  |             |                       | Hall.                            | " "          | 2        | 55    | 20     | 4a, b                         |
|                  |             |                       | <b>Lissopleura</b> Whitfield.    |              |          |       |        |                               |
| L. H.            | 2475        | Gen. and<br>Sp. Type. | æquivalvis.....Hall.             | N. Y. S. M.  | 10       | 66    | ....   | .....                         |
|                  | 1           |                       | "                                | Pal. N. Y.   | 3        | 224   | 29     | 2a-3c                         |
|                  |             |                       | Whitfield.                       | A. M. N. H.  | 8        | 231   | p. 232 | 1-5                           |
|                  |             |                       | <b>Merista</b> Suess.            |              |          |       |        |                               |
|                  |             |                       | arcuata.....                     | .....        | .....    | ..... | .....  | .....                         |
|                  |             |                       | bella.....                       | .....        | .....    | ..... | .....  | .....                         |
| L. H.            | 2458        | Type.                 | elongata.....Hall.               | N. Y. S. M.  | 12       | 43    | ....   | 2, int.                       |
|                  |             |                       | "                                | Pal. N. Y.   | 3        | 488   | 95A    | 4, "                          |
|                  |             |                       | lævis.....                       | .....        | .....    | ..... | .....  | .....                         |
|                  |             |                       | Meeki.....                       | .....        | .....    | ..... | .....  | .....                         |
|                  |             |                       | princeps.....                    | .....        | .....    | ..... | .....  | .....                         |
|                  |             |                       | subquadrata.....                 | .....        | .....    | ..... | .....  | .....                         |
| L. H.            | 2456        | Type.                 | typus.....Hall.                  | N. Y. S. M.  | 12       | 42    | ....   | 1, 3-6                        |
|                  |             |                       | "                                | Pal. N. Y.   | 3        | 487   | 95A    | 2a, b, 3, 5, 6                |
|                  |             |                       | H. & C.                          | St. G. N. Y. | 13       | ....  | 33     | 12-14                         |
|                  |             |                       | "                                | Pal. N. Y.   | 8, pt. 2 | 71    | 42     | 7, 8, 10                      |
|                  |             |                       | sp.....                          | " "          | 3        | 252   | 45     | 1a-c                          |
|                  |             |                       | <b>Meristella</b> Hall.          |              |          |       |        |                               |
| L. H.            | 2449        | Type.                 | arcuata.....Hall.                | N. Y. S. M.  | 10       | 95    | ....   | .....                         |
|                  | 4           |                       | "                                | Pal. N. Y.   | 3        | 249   | 41     | 1c-e, t                       |
| "                | 2449        | "                     | "....."                          | " "          | 3        | 249   | 41     | 1f-o                          |
|                  | 1           |                       | H. & C.                          | " "          | 8, pt. 2 | 76    | 43     | 1, 2                          |
| "                | 2449        | "                     | ".....Hall.                      | " "          | 3        | 249   | 41     | 1p, int.                      |
| "                | 2           | Fig'd.                | "....."                          | " "          | 3        | 250   | 41     | 2a-g                          |



| LOCALITY.             | REMARKS.                                                                                                                         |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Near Hudson, N. Y.    | As <i>Strophodonta Becki</i> . Internal casts of two large ventral valves.                                                       |
| “ “ “                 | “ “ “ Interior imprint large dorsal valve.                                                                                       |
| .....                 | “ “ “                                                                                                                            |
| Near Hudson, N. Y.    | As <i>Stropheodonta Leptostrophia (Becki)</i> . Large vent. valve, imb.                                                          |
| Clarksville, N. Y.    | A large and a small individual, imbedded separately.                                                                             |
| Martville, N. Y.      | As <i>Lingula oblonga</i> Con. Dorsal? valve, imbedded.                                                                          |
| Medina, N. Y.         | Internal cast retaining some shell ; referred to this figure.                                                                    |
| .....                 | As rill markings.                                                                                                                |
| Near Lockport, N.Y.   | Small slab bearing three valves and strong rill marks.                                                                           |
| Lockport, N. Y.       | Two ventral valves of medium size, imbedded.                                                                                     |
| .....                 | See <i>L. taniola</i> .                                                                                                          |
| .....                 | “ <i>Dignomia oblata</i> .                                                                                                       |
| .....                 | “ <i>Lingula Clintoni</i> .                                                                                                      |
| Clarksville, N. Y.    | Exfoliated individual showing both valves.                                                                                       |
| Schoharie, N. Y.      | Part of a large somewhat exfoliated valve, imbedded.                                                                             |
| Rochester, N. Y.      | Imprint from which much of shell has been lost.                                                                                  |
| Schoharie, N. Y.      | Small exfoliated individual, imbedded.                                                                                           |
| Nr. Hudson, N. Y.     | Large, exfoliated, distorted valve, imbedded.                                                                                    |
| Clarksville, N. Y.    | Individual of medium size.                                                                                                       |
| Schoharie, N. Y.      | Large, imbedded individual.                                                                                                      |
| Near Hudson, N. Y.    | Large valve, imbedded.                                                                                                           |
| Clinton, N. Y.        | As <i>Lingula lamellata</i> Hall. Well preserved ventr. valve, imbedded.                                                         |
| .....                 | “ <i>Rhynchonella æquivalvis</i> .                                                                                               |
| .....                 | “ “ (?) “                                                                                                                        |
| Helderberg Mts., N.Y. | Made generic type. Six more or less exfoliated individuals.                                                                      |
| .....                 | See <i>Meristella arcuata</i> .                                                                                                  |
| .....                 | “ “ <i>bella</i> .                                                                                                               |
| .....                 | As <i>Camarium elongatum</i> .                                                                                                   |
| Cumberland, Md.       | “ <i>Merista (Camarium) elongata</i> . Ventral valve, silicified.                                                                |
| .....                 | See <i>Meristella lævis</i> .                                                                                                    |
| .....                 | “ “ <i>Meeki</i> .                                                                                                               |
| .....                 | “ “ <i>princeps</i> .                                                                                                            |
| .....                 | “ “ <i>subquadrata</i> .                                                                                                         |
| .....                 | As type of genus <i>Camarium</i> .                                                                                               |
| .....                 | “ <i>Merista (Camarium) typus</i> .                                                                                              |
| Cumberland, Md.       | A weathered individual and a ventral valve, silicified.                                                                          |
| .....                 | See <i>Meristella</i> sp.                                                                                                        |
| .....                 | As <i>Merista arcuata</i> .                                                                                                      |
| Helderberg Mts., N.Y. | As <i>Merista (=Meristella) arcuata</i> . Two small, very perfect individuals and a large one worn so as to show part of spires. |
| .....                 | As <i>Merista (=Meristella) arcuata</i> .                                                                                        |
| Near Schoharie, N. Y. | Four entire individuals and a somewhat broken ventral valve. The locality given in the last reference is questionable.           |
| Near Hudson, N. Y.    | As <i>Merista (=Meristella) arcuata</i> . Internal cast small ventr. valve.                                                      |
| “ “ “                 | “ “ “ prob.= <i>M. arcuata</i> . Two entire internal casts and two casts of large ventral valves.                                |

Class BRACHIOPODA—Continued.

| Geol. Subdiv.    | Cat. No.         | Type or Fig'd Sp.        | GENUS, SPECIES AND AUTHOR.           | REFERENCE.   |          |      |      |            |
|------------------|------------------|--------------------------|--------------------------------------|--------------|----------|------|------|------------|
|                  |                  |                          |                                      | Work.        | Vol.     | P.   | Pl.  | Figs.      |
| L. H.            | <u>2450</u><br>1 | Type.                    | <b>Meristella</b> Hall— <i>Cont.</i> |              |          |      |      |            |
|                  |                  |                          | bella .....Hall.                     | N. Y. S. M.  | 10       | 92   | .... | .....      |
|                  | <u>2450</u><br>2 | “                        | “ .....H. & C.                       | Pal. N. Y.   | 3        | 248  | 40   | 1a-l       |
|                  |                  |                          | “ .....Hall.                         | “ “          | 8, pt. 2 | 76   | 43   | 7-9        |
|                  | <u>2451</u><br>1 | Fig'd Sp. and Gen. Type. | lævis ( <i>Vanux.</i> )....Hall.     | “ “          | 3        | 248  | 40   | 1m-p       |
|                  |                  |                          | “ .....H. & C.                       | “ “          | 3        | 247  | 39   | 2a-3e      |
|                  | <u>2451</u><br>2 | “                        | “ ( <i>Vanux.</i> ).....H.           | N. Y. S. M.  | 13       | 74   | .... | .....      |
|                  |                  |                          | “ “ .....H.                          | Pal. N. Y.   | 3        | 247  | 39   | 3f-k       |
|                  | <u>2451</u><br>1 | “                        | “ “ .....H. & C.                     | “ “          | 3        | 247  | 39   | 3l-n, t, u |
|                  |                  |                          | “ (Vanux.).....H.                    | “ “          | 8, pt. 2 | 75   | 43   | 5, 6       |
| <u>2451</u><br>3 | “                | “ (Vanux.).....H.        | “ “                                  | 3            | 247      | 39   | 4a-d |            |
|                  |                  |                          |                                      |              |          |      |      |            |
| L. H.            | 2457             | Type.                    | <i>Maria</i> .....                   |              |          |      |      |            |
|                  |                  |                          | Meeki .....Hall.                     | N. Y. S. M.  | 10       | 97   | .... | .....      |
|                  | <u>2454</u><br>1 | “                        | princeps.....Hall.                   | Pal. N. Y.   | 3        | 252  | 44   | 6a-d       |
|                  |                  |                          | “ .....H. & C.                       | N. Y. S. M.  | 10       | 95   | .... | .....      |
|                  | <u>2452</u><br>1 | Type.                    | subquadrata .....Hall.               | Pal. N. Y.   | 3        | 251  | 44   | 1a,b,4a-5d |
|                  |                  |                          | “ .....H. & C.                       | “ “          | 8, pt. 2 | 78   | 43   | 10-13      |
|                  | <u>2452</u><br>3 | “                        | “ “ .....Hall.                       | N. Y. S. M.  | 10       | 93   | .... | .....      |
|                  |                  |                          | “ “ .....H.                          | Pal. N. Y.   | 3        | 249  | 40   | 2c-f       |
|                  | <u>2452</u><br>3 | “                        | “ “ .....H. & C.                     | “ “          | 3        | 249  | 40   | 3a-d       |
|                  |                  |                          | “ “ .....H. & C.                     | “ “          | 8, pt. 2 | 78   | 43   | 14, 15     |
| <u>2455</u>      | Fig'd.           | sp .....Hall.            | “ “                                  | 3            | 252      | 45   | 1a-c |            |
|                  |                  |                          |                                      |              |          |      |      |            |
| Niag.            | 1936             | Gen. and Sp. Type.       | <b>Meristina</b> Hall.               |              |          |      |      |            |
|                  |                  |                          | Maria .....Hall.                     | T. A. I.     | 4        | 212  | .... | .....      |
|                  | “                | “                        | “ .....H. & C.                       | N. Y. S. M.  | 28       | 159  | 25   | 8-11       |
|                  |                  |                          | “ .....H. & C.                       | “ “          | 28       | 159  | 25   | 9, 10, 12  |
|                  | “                | “                        | “ .....H. & C.                       | St. G. N. Y. | 13       | .... | 33   | 1, 2       |
|                  |                  |                          | “ .....H. & C.                       | Pal. N. Y.   | 8, pt. 2 | 67   | 41   | 2, 3       |
|                  | “                | “                        | “ (Hall)...H. & C.                   | St. G. N. Y. | 13       | .... | 33   | 3, 4       |
|                  |                  |                          | “ .....H. & C.                       | Pal. N. Y.   | 8, pt. 2 | 67   | 41   | 5, 6       |
|                  | 2058             | Type.                    | “ (Hall)..H. & W.                    | Pal. Ohio.   | 2        | 132  | 7    | 5, 6       |
|                  |                  |                          | <i>nitida</i> .....H. & W.           |              |          |      |      |            |
| Niag.            | 2196             | Type.                    | <b>Nucleospira</b> Hall.             |              |          |      |      |            |
|                  |                  |                          | concentrica .....Hall.               | Pal. N. Y.   | 3        | 223  | 28B  | 16, 19     |
|                  | <u>2469</u><br>1 | “                        | elegans .....Hall.                   | “ “          | 3        | 222  | 28B  | 10, 11, 14 |
|                  |                  |                          | “ .....H. & C.                       | “ “          | 3        | 222  | 28B  | 12c, d     |
|                  | <u>2469</u><br>2 | “                        | “ .....H. & C.                       | “ “          | 3        | 222  | 28B  | 13a, b     |
|                  |                  |                          | “ .....H. & C.                       | St. G. N. Y. | 13       | .... | 38   | 27, 28     |
|                  | <u>1778</u><br>1 | “                        | pisiformis .....Hall.                | Pal. N. Y.   | 8, pt. 2 | 145  | 48   | 8, 9       |
|                  |                  |                          | “ .....H. & C.                       | N. Y. S. M.  | 12       | 25   |      |            |
|                  | <u>1778</u><br>2 | “                        | “ .....H. & C.                       | Pal. N. Y.   | 2        | 250  | 52   | 1b-e       |
|                  |                  |                          | “ .....H. & C.                       | N. Y. S. M.  | 28       | 160  | 25   | 22-28      |
| L. H.            | <u>2468</u><br>1 | Gen. and Sp. Type.       | <i>ventricosa</i> .....Hall.         | “ “          | 10       | 57   | .... | .....      |
|                  |                  |                          | “ .....H. & C.                       | Pal. N. Y.   | 3        | 220  | 14   | 1a-h       |
|                  | “                | “                        | “ .....H. & C.                       | “ “          | 3        | 220  | 28B  | 2-4        |
|                  |                  |                          | “ .....H. & C.                       | “ “          | 3        | 220  | 28B  | 5, 9, 9a   |
|                  | “                | “                        | “ .....H. & C.                       | “ “          | 3        | 220  | 28B  | 6-8        |
|                  |                  |                          | “ .....H. & C.                       | St. G. N. Y. | 13       | .... | 38   | 24, 25     |
|                  | “                | “                        | “ .....H. & C.                       | Pal. N. Y.   | 8, pt. 2 | 144  | 48   | 4, 5       |
|                  |                  |                          | “ .....H. & C.                       | “ “          | 3        | 220  | 28B  | 2-4        |
|                  | “                | “                        | “ .....H. & C.                       | “ “          | 3        | 220  | 28B  | 5, 9, 9a   |
|                  |                  |                          | “ .....H. & C.                       | “ “          | 3        | 220  | 28B  | 6-8        |



| LOCALITY.               | REMARKS.                                                                                                                          |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| .....                   | As <i>Merista bella</i> .                                                                                                         |
| .....                   | " <i>Merista</i> (= <i>Meristella</i> ) <i>bella</i> .                                                                            |
| The Helderbergs, N. Y.  | Five perfect individuals. Locality incorrect in last reference.                                                                   |
| Nr. Schoharie, N. Y.    | As <i>Merista</i> (= <i>Meristella</i> ) <i>bella</i> . Very large, entire individual.                                            |
| .....                   | " " " <i>laevis</i> .                                                                                                             |
| The Helderbergs, N. Y.  | Genus <i>Meristella</i> defined. Six small individuals.                                                                           |
| Schoharie, N. Y.        | As <i>Merista</i> (= <i>Meristella</i> ) <i>laevis</i> . Three indiv., partly exfoliated.                                         |
| .....                   | " " " "                                                                                                                           |
| The Helderbergs, N. Y.  | Two adult individuals; partly exfoliated.                                                                                         |
| Catskill Creek, N. Y.   | As <i>Merista</i> (= <i>Meristella</i> ) <i>laevis</i> . A ventral valve and two internal casts of ventral valves.                |
| .....                   | See <i>Meristina Maria</i> .                                                                                                      |
| .....                   | As <i>Merista Meeki</i> .                                                                                                         |
| Tennessee.              | " " " A nearly perfect adult, silicified.                                                                                         |
| .....                   | " " <i>princeps</i> .                                                                                                             |
| .....                   | " <i>Merista</i> (= <i>Meristella</i> ?) <i>princeps</i> .                                                                        |
| Carlisle, N. Y.         | Four individuals. Locality incorrect in last reference.                                                                           |
| .....                   | As <i>Merista subquadrata</i> .                                                                                                   |
| The Helderbergs, N. Y.  | " <i>Merista</i> (= <i>Meristella</i> ) <i>subquadrata</i> . Entire, young individual.                                            |
| .....                   | " " " "                                                                                                                           |
| Schoharie, N. Y.        | An adult with lower part of ventral valve worn away so as to show position of spires.                                             |
| Carlisle, N. Y.         | As <i>Merista</i> (= <i>Meristella</i> ) sp. undet. Three very small individuals which may be the young of more than one species. |
| .....                   | Genus defined, Pal. N. Y., vol. 4, p. 299.                                                                                        |
| .....                   | As <i>Meristella Maria</i> .                                                                                                      |
| Waldron, Ind.           | A small and a large individual.                                                                                                   |
| " "                     | A very perfect adult.                                                                                                             |
| " "                     | Two opposite valves, entire.                                                                                                      |
| Yellow Springs, O.      | Internal cast of large individual, entire.                                                                                        |
| .....                   | See <i>Whitfieldella nitida</i> .                                                                                                 |
| Decatur Co., Tenn.      | Three individuals, one showing spires. From the Meniscus beds in the "Glade" region.                                              |
| Near Clarksville, N. Y. | Three entire indiv., ventr. valve of one broken away showing spires.                                                              |
| Cumberland, Md.         | A large adult.                                                                                                                    |
| Cherry Valley, N. Y.    | A large, gibbous individual.                                                                                                      |
| Wolcott, N. Y.          | As <i>Orthis pisum</i> Sow. A young and an adult individual.                                                                      |
| Waldron, Ind.           | Three individuals of different degrees of ventricosity.                                                                           |
| .....                   | As <i>Spirifer ventricosus</i> .                                                                                                  |
| Nr. Clarksville, N. Y.  | Eight entire individuals. Original of 1f is doubtfully present.                                                                   |
| " " "                   | Two entire individuals and an entire internal cast.                                                                               |
| " " "                   | Two fragments showing spires, used, with others, for the figures.                                                                 |
| " " "                   | Two detached, opposite valves and a dorsal valve to which the umbonal part of the ventral valve adheres.                          |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.       | REFERENCE.   |          |       |       |                |
|---------------|------------------|--------------------|----------------------------------|--------------|----------|-------|-------|----------------|
|               |                  |                    |                                  | Work.        | Vol.     | P.    | Pl.   | Figs.          |
|               |                  |                    | <b>Obolus</b> Eichwald.          |              |          |       |       |                |
|               |                  |                    | <i>Conradi</i> .....             | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <b>Orbicula</b> Cuvier.          |              |          |       |       |                |
|               |                  |                    | <i>corrugata</i> .....           | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>squamiformis</i> .....        | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>tenuilamellata</i> .....      | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <b>Orbiculoidea</b> d'Orb.       |              |          |       |       |                |
| L. H.         | $\frac{2409}{1}$ | Type.              | <i>Conradi</i> .....Hall.        | Pal. N. Y.   | 3        | 161   | 9     | 12, 12a        |
| "             | $\frac{2409}{2}$ | "                  | "....."                          | " "          | 3        | 161   | 9     | 16-17a         |
| "             | $\frac{2407}{1}$ | "                  | <i>discus</i> .....Hall.         | " "          | 3        | 159   | 9     | 13-15b, 16a    |
| Niag.         | 1762             | "                  | <i>tenuilamellata</i> .....Hall. | " "          | 2        | 250   | 53    | 3, ext.        |
| L. H.         | 2408             | "                  | ? <i>Vanuxemi</i> .....Hall.     | " "          | 3        | 162   | 8     | 1-1b           |
|               |                  |                    | <b>Orthis</b> Dalman.            |              |          |       |       |                |
|               |                  |                    | <i>assimilis</i> .....           | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>circulus</i> .....            | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>concinna</i> .....            | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>deformis</i> .....            | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>discus</i> .....              | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>elegantula</i> .....          | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>eminens</i> .....             | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>fasciata</i> .....            | .....        | .....    | ..... | ..... | .....          |
| Niag.         | $\frac{1515}{4}$ | Type.              | <i>flabellites</i> .....Hall.    | N. Y. S. M.  | 20       | 397   | ..... | .....          |
| "             | "                | "                  | "....."                          | Pal. N. Y.   | 2        | 254   | 52    | 6a-c, g        |
| "             | "                | "                  | "....."                          | " "          | 2        | 254   | 52    | 6d, int.       |
| "             | "                | "                  | "....."                          | " "          | 2        | 254   | 52    | 6e, int.       |
| "             | "                | "                  | "....."                          | " "          | 2        | 254   | 52    | 6f, card.      |
| "             | "                | Fig'd.             | " ? "                            | " "          | 2        | 255   | 52    | 7a-d           |
|               |                  |                    | <i>flabellulum</i> .....         | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>hybrida</i> .....             | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>insignis</i> .....            | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>interstriata</i> .....        | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>multistriata</i> .....        | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>oblata</i> .....              | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | " var. <i>emarginata</i> .       | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>peduncularis</i> .....        | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>perelegans</i> .....          | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>pisum</i> .....               | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>planoconvexa</i> .....        | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>punctostriata</i> .....       | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>pyramidalis</i> .....         | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>strophomenoides</i> .....     | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>subcarinata</i> .....         | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>tenuidens</i> .....           | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>trinucleus</i> .....          | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>tubulostriata</i> .....       | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <i>varica</i> .....              | .....        | .....    | ..... | ..... | .....          |
|               |                  |                    | <b>Orthostrophia</b> Hall.       |              |          |       |       |                |
| Niag.         | $\frac{1768}{1}$ | Type.              | <i>fasciata</i> .....Hall.       | Pal. N. Y.   | 2        | 255   | 52    | 8a, b          |
| L. H.         | 2422             | Gen. and Sp. Type. | <i>strophomenoides</i> ..Hall.   | N. Y. S. M.  | 10       | 46    | ..... | .....          |
| "             | "                | "                  | "....."                          | Pal. N. Y.   | 3        | 177   | 14    | 2a-c, f        |
| "             | "                | "                  | "....."                          | " "          | 3        | 177   | 14    | 2d, e          |
|               |                  |                    | "....."                          | " "          | .....    | ..... | 23    | 7f             |
|               |                  |                    | "....."                          | St. G. N. Y. | 2        | ..... | 36    | 33, int. v. v. |
|               |                  |                    | "....."                          | " "          | 11       | ..... | 10    | 8, " "         |
|               |                  |                    | "....."                          | Pal. N. Y.   | 8, pt. 1 | 200   | 6     | 33, " "        |



| LOCALITY.              | REMARKS.                                                                                              |
|------------------------|-------------------------------------------------------------------------------------------------------|
| .....                  | See <i>Dinobolus Conradi</i> .                                                                        |
| .....                  | See <i>Lichenalia concentrica</i> ,                                                                   |
| .....                  | “ <i>Pholidops squamiformis</i> .                                                                     |
| .....                  | “ <i>Orbiculoidea tenuilamellata</i> .                                                                |
| Near Hudson, N. Y.     | As <i>Discina Conradi</i> . A small ventral valve, imbedded.                                          |
| Clarksville, N. Y.     | “ “ “ A large, exfoliated dorsal valve, imbedded.                                                     |
| Near Hudson, N. Y.     | “ “ <i>discus</i> . Three large, exfoliated ventr. valves, imbedded.                                  |
| Lockport, N. Y.        | “ <i>Orbicula tenuilamellata</i> . A broken ventral valve, imbedded.<br>May be a <i>Schizotreta</i> . |
| Manlius Square, N.Y.   | As <i>Discina Vanuxemi</i> . Exfoliated dorsal valve, imbedded.                                       |
| .....                  | See <i>Rhipidomella assimilis</i> .                                                                   |
| .....                  | “ “ <i>circulus</i> .                                                                                 |
| .....                  | “ “ <i>concinna</i> .                                                                                 |
| .....                  | “ <i>Orthotheses deformis</i> .                                                                       |
| .....                  | “ <i>Rhipidomella discus</i> .                                                                        |
| .....                  | “ <i>Dalmanella elegantula</i> .                                                                      |
| .....                  | “ <i>Rhipidomella eminens</i> .                                                                       |
| .....                  | “ <i>Orthostrophia fasciata</i> .                                                                     |
| .....                  | Name first used in a list without defining the species.                                               |
| Rochester, N. Y.       | As <i>Orthis flabellulum</i> Sow., var.? Entire individual, compressed.                               |
| “ “                    | “ “ “ “ “ Dorsal valve.                                                                               |
| “ “                    | “ “ “ “ “ Internal cast ventral valve.                                                                |
| “ “                    | “ “ “ “ “ Imbedded ventral valve, retain-                                                             |
| “ “                    | ing cast of dorsal valve.                                                                             |
| .....                  | As <i>Orthis flabellulum</i> ? var.? Individual, nearly entire.                                       |
| .....                  | See <i>Orthis flabellites</i> .                                                                       |
| .....                  | “ <i>Rhipidomella hybrida</i> .                                                                       |
| .....                  | “ <i>Scenidium insigne</i> .                                                                          |
| .....                  | “ <i>Orthotheses interstriatus</i> .                                                                  |
| .....                  | “ <i>Schizophoria multistriata</i> .                                                                  |
| .....                  | “ <i>Rhipidomella oblata</i> .                                                                        |
| .....                  | “ “ “ var. <i>emarginata</i> .                                                                        |
| .....                  | “ <i>Schizophoria peduncularis</i> .                                                                  |
| .....                  | “ <i>Dalmanella perelegans</i> .                                                                      |
| .....                  | “ <i>Nucleospira pisiiformis</i> .                                                                    |
| .....                  | “ <i>Dalmanella planoconvexa</i> .                                                                    |
| .....                  | “ <i>Porambonites punctostriatus</i> .                                                                |
| .....                  | “ <i>Scenidium pyramidale</i> .                                                                       |
| .....                  | “ <i>Orthostrophia strophomenoides</i> .                                                              |
| .....                  | “ <i>Dalmanella subcarinata</i> .                                                                     |
| .....                  | “ “ <i>testudinaria</i> .                                                                             |
| .....                  | “ <i>Rhipidomella trinucleus</i> .                                                                    |
| .....                  | “ “ <i>tubulostriata</i> .                                                                            |
| .....                  | “ <i>Bilobites varicus</i> .                                                                          |
| Rochester, N. Y.       | As <i>Orthis fasciata</i> . Interior imprint of two opposite valves.                                  |
| .....                  | “ “ <i>strophomenoides</i> .                                                                          |
| Nr. Clarksville, N. Y. | “ “ “ Three exfoliated dorsal valves, imbedded.                                                       |
| .....                  | “ “ “                                                                                                 |
| .....                  | Made type of genus <i>Orthostrophia</i> .                                                             |
| Nr. Clarksville, N. Y. | Two large internal casts of ventral valve, imbedded.                                                  |

Class BRACHIOPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                         | REFERENCE.   |          |       |       |              |
|------------------|------------------|-----------------------|--------------------------------------------------------------------|--------------|----------|-------|-------|--------------|
|                  |                  |                       |                                                                    | Work.        | Vol.     | P.    | Pl.   | Figs.        |
| L. H.            | 2422             | Gen. and<br>Sp. Type. | <b>Orthostrophia</b> Hall— <i>Cont.</i><br>strophomenoides...Hall. | Pal. N. Y.   | 3        | 177   | 14    | 2g-k         |
| "                | "                | "                     | "                                                                  | "            | 3        | 177   | 23    | 7d, g        |
| "                | "                | "                     | "                                                                  | St. G. N. Y. | 2        | ....  | 23    | 7a, b        |
| "                | "                | "                     | " H. & C.                                                          | Pal. N. Y.   | 8, pt. I | 200   | 6     | 32, d. v.    |
| "                | "                | "                     | " Hall.                                                            | "            | 3        | 177   | 23    | 32, "        |
| "                | "                | "                     | "                                                                  | St. G. N. Y. | 2        | ....  | 36    | 7c, int.     |
| "                | "                | "                     | " H. & C.                                                          | "            | 11       | ....  | 10    | 34, "        |
| "                | "                | "                     | "                                                                  | Pal. N. Y.   | 8, pt. I | 200   | 6     | 7, "         |
| "                | "                | "                     | "                                                                  | "            | "        | "     | "     | 34, "        |
| L. H.            | <u>2427</u><br>1 | Type.                 | <b>Orthothetes</b> Fischer.<br>deformis .....Hall.                 | N. Y. S. M.  | 10       | 44    | ....  | .....        |
| "                | "                | "                     | "                                                                  | Pal. N. Y.   | 3        | 174   | 10A   | 13a, b       |
| "                | "                | "                     | "                                                                  | "            | "        | "     | 15    | 3a, b        |
| "                | "                | "                     | "                                                                  | St. G. N. Y. | 2        | ....  | 39    | 32, d. v.    |
| "                | "                | "                     | " H. & C.                                                          | Pal. N. Y.   | 8, pt. I | 255   | 9     | 32, "        |
| Cor.             | 1854             | Type.                 | interstriatus .....Hall.                                           | "            | 2        | 326   | 74    | 1a, b, 2a, b |
| Niag.            | <u>1521</u><br>5 | Fig'd.                | subplanus (Con.)...Hall.                                           | "            | 2        | 259   | 53    | 8a,          |
| "                | "                | "                     | "                                                                  | "            | 2        | 259   | 53    | int. d. v.   |
| "                | "                | "                     | "                                                                  | "            | 2        | 259   | 53    | 8b, c        |
| "                | "                | "                     | "                                                                  | "            | 2        | 259   | 53    | 9a, d. v.    |
| "                | <u>1521</u><br>7 | "                     | "                                                                  | "            | 2        | 259   | 53    | 9b,          |
| "                | <u>1521</u><br>4 | "                     | "                                                                  | "            | 2        | 259   | 53    | int. d. v.   |
| "                | <u>1521</u><br>5 | "                     | "                                                                  | "            | 2        | 259   | 53    | 10a, c       |
| "                | <u>1521</u><br>8 | "                     | "                                                                  | "            | 2        | 259   | 53    | 10b, card    |
| "                | "                | "                     | "                                                                  | N. Y. S. M.  | 28       | 151   | 21    | 26, 27       |
| "                | "                | "                     | "                                                                  | St. G. N. Y. | 2        | ....  | 39    | 21, 23       |
| "                | "                | "                     | " H. & C.                                                          | Pal. N. Y.   | 8, pt. I | 255   | 9     | 21, 23       |
| "                | "                | "                     | " (Con.) Hall.                                                     | N. Y. S. M.  | 28       | 151   | 21    | 28-32        |
| "                | "                | "                     | "                                                                  | St. G. N. Y. | 2        | ....  | 39    | 22, 24       |
| "                | "                | "                     | " H. & C.                                                          | Pal. N. Y.   | 8, pt. I | 255   | 9     | 22, 24       |
| Cl.              | <u>1521</u><br>4 | "                     | " (Con.) Hall.                                                     | "            | 2        | 103   | 31    | 2            |
| Niag.            | 1930             | Type.                 | tenuis .....Hall.                                                  | T. A. I.     | 4        | 210   | ....  | .....        |
| "                | "                | "                     | "                                                                  | N. Y. S. M.  | 28       | 150   | 23    | 11-13        |
| L. H.            | <u>2425</u><br>2 | "                     | <b>Woolworthanus</b> ....Hall.                                     | "            | 10       | 48    | ....  | .....        |
| "                | "                | "                     | "                                                                  | Pal. N. Y.   | 3        | 192   | 17    | 1a-f         |
| "                | "                | "                     | "                                                                  | St. G. N. Y. | 2        | ....  | 39    | 25, 26       |
| "                | "                | "                     | " H. & C.                                                          | Pal. N. Y.   | 8, pt. I | 255   | 9     | 25, 26       |
| "                | "                | "                     | " ...Hall.                                                         | "            | 3        | 192   | 17    | 1h-k         |
| "                | "                | "                     | "                                                                  | St. G. N. Y. | 2        | ....  | 39    | 31,          |
| "                | "                | "                     | "                                                                  | "            | "        | "     | "     | int. v. v.   |
| "                | "                | "                     | " H. & C.                                                          | Pal. N. Y.   | 8, pt. I | 255   | 9     | 31,          |
| "                | <u>2425</u><br>3 | "                     | " ...Hall.                                                         | "            | 3        | 192   | 17    | int. v. v.   |
| "                | <u>2425</u><br>1 | "                     | "                                                                  | "            | 3        | 192   | 17    | 1l, v. v.    |
| "                | <u>2425</u><br>2 | "                     | "                                                                  | "            | 3        | 192   | 17    | 1m, "        |
| "                | "                | "                     | "                                                                  | "            | 3        | 192   | 17    | 1n-r         |
| "                | "                | "                     | "                                                                  | St. G. N. Y. | 2        | ....  | 39    | 27, 28       |
| "                | "                | "                     | " H. & C.                                                          | Pal. N. Y.   | 8, pt. I | 255   | 9     | 27, 28       |
| "                | "                | "                     | " ...Hall.                                                         | "            | 3        | 192   | 17    | 1s, t        |
| "                | <u>2425</u><br>1 | "                     | "                                                                  | "            | 3        | 192   | 17    | 2a, c        |
|                  |                  |                       | <b>Pentamerella</b> Hall.<br>ventricosa .....                      | .....        | .....    | ..... | ..... | .....        |
|                  |                  |                       | <b>Pentamerus</b> Sowerby.<br>galeatus .....                       | .....        | .....    | ..... | ..... | .....        |



| LOCALITY.              | REMARKS.                                                                                                                             |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| .....                  | As <i>Orthis strophomenoides</i> .                                                                                                   |
| Nr. Clarksville, N. Y. | “ “ “ Int. casts of three dorsal valves, imbedded.                                                                                   |
| .....                  | “ “ “                                                                                                                                |
| Nr. Clarksville, N. Y. | An imperfect dorsal valve, imbedded.                                                                                                 |
| .....                  | As <i>Orthis strophomenoides</i> .                                                                                                   |
| Nr. Clarksville, N. Y. | Somewhat broken internal cast of dorsal valve, imbedded with<br><i>O. (Rhipidomella) oblata</i> , fig. 21, pl. 10.                   |
| .....                  | As <i>Orthis deformis</i> .                                                                                                          |
| .....                  | “ “ “                                                                                                                                |
| .....                  | “ “ “                                                                                                                                |
| .....                  | “ <i>Streptorhynchus deforme</i> .                                                                                                   |
| Schoharie, N. Y.       | Two entire adults.                                                                                                                   |
| Schoharie, N. Y.       | As <i>Orthis interstriata</i> . Two indiv.imbedded on opposite valves.                                                               |
| Rochester, N. Y.       | “ <i>Leptæna subplana</i> . Small dorsal valve, imbedded.                                                                            |
| “ “                    | “ “ “ Int. impr. ventr. valve retaining some shell.                                                                                  |
| “ “                    | “ “ “ Exterior imprint dorsal valve ; nearly half<br>has been broken away since the figure was made.                                 |
| Wolcott, N. Y.         | As <i>Leptæna subplana</i> . Central part of hinge of dorsal valve.                                                                  |
| Lockport, N. Y.        | “ “ “ Large ventral valve, imbedded.                                                                                                 |
| Rochester, N. Y.       | “ “ “ Large individ., partly exfoliated, imbedded.                                                                                   |
| .....                  | As <i>Streptorhynchus subplanum</i> . Fig. 27 is an enl. × 1½.                                                                       |
| .....                  | “ “ “ “ 21 “ “                                                                                                                       |
| Waldron, Ind.          | A dorsal and a ventral valve imbedded separately. Locality is in-<br>correct in last reference for fig. 21. Fig. 21 is an enl. × 1½. |
| .....                  | As <i>Streptorhynchus subplanum</i> . For. fig. 33 vid. <i>Strophonella</i><br><i>semifasciata</i> .                                 |
| .....                  | As <i>Streptorhynchus subplanum</i> .                                                                                                |
| Waldron, Ind.          | Two entire adults, one of which is very old.                                                                                         |
| Mohawk, N. Y.          | As <i>Leptæna obscura</i> ? Exterior-interior imprint ventral valve.                                                                 |
| .....                  | As <i>Streptorhynchus tenue</i> .                                                                                                    |
| Waldron, Ind.          | “ “ “ Large opposite valves imbedded sepa-<br>rately. Somewhat imperfect.                                                            |
| .....                  | As <i>Strophomena Woolworthana</i> .                                                                                                 |
| .....                  | “ “ “                                                                                                                                |
| .....                  | “ <i>Streptorhynchus Woolworthanum</i> .                                                                                             |
| Near Schoharie, N. Y.  | Three individuals. The locality is incorrect in last reference.                                                                      |
| .....                  | As <i>Strophomena Woolworthana</i> .                                                                                                 |
| .....                  | “ <i>Streptorhynchus Woolworthanum</i> .                                                                                             |
| Near Schoharie, N. Y.  | Three ventral valves, adult. Locality incorrect in last reference.                                                                   |
| Schoharie, N. Y.       | As <i>Strophomena Woolworthana</i> . Very large ventr. valve, imbedded.                                                              |
| Near Hudson, N. Y.     | “ “ “ Internal cast of large ventr. valve.                                                                                           |
| .....                  | “ “ “                                                                                                                                |
| .....                  | “ <i>Streptorhynchus Woolworthanum</i> .                                                                                             |
| Near Schoharie, N. Y.  | Two dorsal valves, one imbedded. Local. incor. in last reference.                                                                    |
| “ “ “                  | These figs. were prob. made from one of the preceding individuals.                                                                   |
| Near Hudson, N. Y.     | As <i>Strophomena Woolworthana</i> . Two internal casts of dorsal valves.                                                            |
| .....                  | See <i>Barrandella ventricosa</i> .                                                                                                  |
| .....                  | See <i>Sieberella galeata</i> .                                                                                                      |

## Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.              | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.       | REFERENCE.   |          |       |        |                |
|---------------|-----------------------|--------------------|----------------------------------|--------------|----------|-------|--------|----------------|
|               |                       |                    |                                  | Work.        | Vol.     | P.    | Pl.    | Figs.          |
|               |                       |                    | <b>Pentamerus</b> Sow.—Cont.     |              |          |       |        |                |
|               |                       |                    | <i>Littoni</i> .....             | .....        | .....    | ..... | .....  | .....          |
|               |                       |                    | <i>nucleus</i> .....             | .....        | .....    | ..... | .....  | .....          |
| Cl.           | $\frac{1548}{1}$      | Fig'd.             | <i>oblongus</i> (Sow.)...Hall.   | Geol. N. Y.  | 4th D.   | 70    | ct. 15 | I ext.         |
| "             | "                     | "                  | " " " "                          | Pal. N. Y.   | 2        | 79    | 25     | Ib, "          |
| "             | "                     | "                  | " " " "                          | " "          | 2        | 79    | 25     | Ia, d. v.      |
| "             | "                     | "                  | " " " "                          | " "          | 2        | 79    | 25     | Ic, e          |
| "             | "                     | "                  | " " " "                          | " "          | 2        | 79    | 25     | Id, ext. d. v. |
| Cl. or N.     | $\frac{1548}{17}$     | "                  | " " " "                          | " "          | 2        | 79    | 25     | Il, m          |
| "             | $\frac{1548}{3}$      | "                  | " " " "                          | " "          | 2        | 79    | 25     | In, side       |
| "             | $\frac{1548}{2}$      | "                  | " " " "                          | " "          | 2        | 79    | 26     | Ia-d           |
|               |                       |                    | <i>occidentalis</i> .....        | .....        | .....    | ..... | .....  | .....          |
| Cl.           | 1608                  | Type.              | <i>ovalis</i> .....Hall.         | Pal. N. Y.   | 2        | 103   | 31     | I, Ia          |
|               |                       |                    | <i>pseudogaleatus</i> .....      | .....        | .....    | ..... | .....  | .....          |
|               |                       |                    | <i>Verneuili</i> .....           | .....        | .....    | ..... | .....  | .....          |
|               |                       |                    | <i>ventricosus</i> .....         | .....        | .....    | ..... | .....  | .....          |
|               |                       |                    | <b>Pholidops</b> Hall.           |              |          |       |        |                |
| Cl.           | 1627                  | Type.              | <i>acadiensis</i> .....Hall.     | C. N. & G.   | 5        | 144   | ....   | I              |
| Niag.         | 1929                  | "                  | <i>ovalis</i> .....Hall.         | T. A. I.     | 4        | 209   |        |                |
|               |                       |                    | " " " "                          | Pal. N. Y.   | 4        | ....  | 3      | I, 2           |
|               |                       |                    | " " " "                          | N. Y. S. M.  | 28       | 149   | 21     | I, 2           |
|               |                       |                    | H. & C.                          | St. G. N. Y. | 11       | ....  | 7      | 15, prof.      |
|               |                       |                    | " " " "                          | Pal. N. Y.   | 8, pt. 1 | 157   | 41     | 20, 32         |
|               |                       |                    | <i>squamiformis</i> .....Hall.   | Geol. N. Y.  | 4th D.   | 108   | ....   | I              |
| Niag.         | 1763                  | Gen. and Sp. Type. | " " " "                          | Pal. N. Y.   | 2        | 250   | 53     | 4a, b          |
|               |                       |                    | <b>Platystrophia</b> King.       |              |          |       |        |                |
| Cl.           | $\frac{693}{17}$      | Fig'd.             | <i>lynx</i> (v. Eichw.)...Hall.  | " "          | 2        | 65    | 22     | Ia-e           |
|               |                       |                    | <b>Plectambonites</b> Pander     |              |          |       |        |                |
| Cl.           | $\frac{704}{24}$      | Fig'd.             | <i>sericeus</i> (Sow.)...Hall.   | Geol. N. Y.  | 4th D.   | 73    | ct. 17 | I, int.        |
| "             | "                     | "                  | " " " "                          | Pal. N. Y.   | 2        | 59    | 21     | Ia, ext.       |
| "             | "                     | "                  | " " " "                          | " "          | 2        | 59    | 21     | Ib, d          |
| "             | "                     | "                  | " " " "                          | " "          | 2        | 59    | 21     | Ic, e          |
| Niag.         | $\frac{1769}{2 \& 3}$ | "                  | <i>transversalis</i> (Wahl.)..H. | " "          | 2        | 256   | 53     | 5a-i           |
| "             | $\frac{1769}{1}$      | "                  | " " " "                          | " "          | 2        | 256   | 53     | 5k, l          |
|               |                       |                    | H. & C.                          | St. G. N. Y. | 11       | ....  | 19     | 3, int.        |
|               |                       |                    | " " " "                          | Pal. N. Y.   | 8, pt. 1 | 296   | 15     | 36, int.       |
| "             | "                     | "                  | " (Wahl.)..Hall.                 | St. G. N. Y. | 2        | ....  | 46     | 34, 35         |
|               |                       |                    | H. & C.                          | " "          | 11       | ....  | 19     | I, ext. v. v.  |
|               |                       |                    | " " " "                          | Pal. N. Y.   | 8, pt. 1 | 296   | 15     | 34, 35         |
|               |                       |                    | <b>Porambonites</b> Pander.      |              |          |       |        |                |
| Cl.           | 1547                  | Type.              | <i>punctostriatus</i> .....Hall. | " "          | 2        | 254   | 52     | 5a-c           |
|               |                       |                    | <b>Rafinesquina</b> H. & C.      |              |          |       |        |                |
| Cl.           | $\frac{1517}{2}$      | Type.              | <i>obscura</i> .....Hall.        | " "          | 2        | 62    | 21     | 6b, v. v.      |
|               |                       |                    | <b>Rensselæria</b> Hall.         |              |          |       |        |                |
| L. H.         | 2505                  | Type.              | <i>æquiradiata</i> .....Hall.    | " "          | 3        | 255   | 45     | 3a-g           |
|               |                       |                    | H. & C.                          | " "          | 8, pt. 2 | 258   | 76     | 23-25          |
| "             | 2503                  | "                  | <i>lævis</i> .....Hall.          | " "          | 3        | 256   | 40     | 2a, b          |



| LOCALITY.             | REMARKS.                                                                                                                                 |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| .....                 | See <i>Conchidium Littoni</i> .                                                                                                          |
| .....                 | “ <i>Sieberella nucleus</i> .                                                                                                            |
| Rochester, N. Y.      | Large, somewhat exfoliated ventral valve, imbedded.                                                                                      |
| “ “                   | Large, nearly entire individual.                                                                                                         |
| “ “                   | Two ventral valves imbedded together.                                                                                                    |
| “ “                   | Broad dorsal valve of medium size, imbedded.                                                                                             |
| Iowa.                 | Siliceous internal cast of a rather small individual.                                                                                    |
| Milwaukee, Wis.       | Internal cast of a large individual.                                                                                                     |
| Springfield, O.       | Internal cast of a very large, gibbous individual.                                                                                       |
| .....                 | See <i>Conchidium occidentale</i> .                                                                                                      |
| Mohawk, N. Y.         | Two internal casts, imbedded together.                                                                                                   |
| .....                 | See <i>Sieberella pseudogaleata</i> .                                                                                                    |
| .....                 | “ <i>Anastrophia Verneuili</i> .                                                                                                         |
| .....                 | “ <i>Barrandella ventricosa</i> .                                                                                                        |
| Arisaig, N. S.        | As <i>Crania acadiensis</i> . Interior imprint ventral? valve.                                                                           |
| .....                 | As <i>Pholidops hamiltoniæ</i> Hall by error.                                                                                            |
| Waldron, Ind.         | An entire individual. The enl. are × 5. Fig. 32 of the last reference is erroneously referred to <i>P. hamiltoniæ</i> in expl. of plate. |
| Lockport, N. Y.       | As <i>Orbicula ? squamiformis</i> . Ventr. ? valve of med. size, imbedded.                                                               |
| Reynale’s Basin, N.Y. | As <i>Spirifera biforata</i> (Schloth.) var. <i>lynx</i> (Eichw.) Four ventral valves ; two imbedded ; one shows interior.               |
| Sodus, N. Y.          | As type of <i>Strophomena elegantula</i> Hall. Cast of ventral valve with shell exfoliated, imbedded.                                    |
| “ “                   | As <i>Leptæna sericea</i> . Exfoliated cast of ventral valve imbedded with <i>Atrypa reticularis</i> , fig. 8a, pl. 23.                  |
| “ “                   | As <i>Leptæna sericea</i> . Ventral valve, imbedded.                                                                                     |
| “ “                   | “ “ “ Internal cast ventral valve, imbedded.                                                                                             |
| { Rochester and }     | “ “ “ Four individuals of progressive size.                                                                                              |
| { Wolcott, N. Y. }    | “ “ “                                                                                                                                    |
| .....                 |                                                                                                                                          |
| Lockport, N. Y.       | Large dorsal valve showing the muscular scars, etc.                                                                                      |
| .....                 | As <i>Leptæna sericea</i> .                                                                                                              |
| Lockport, N. Y.       | Two individuals ; one imbedded.                                                                                                          |
| “ “                   | As <i>Orthis punctostriata</i> . Two indiv.; one w. shell partly removed.                                                                |
| New Hartford, N. Y.   | As <i>Leptæna obscura</i> . Imperfect imprint large ventral valve.                                                                       |
| { Schoharie and }     | Two somewhat exfoliated individuals.                                                                                                     |
| { Carlisle, N. Y. }   | Entire individual, imbedded. May not belong to this genus.                                                                               |
| Carlisle, N. Y.       |                                                                                                                                          |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.                  | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                              | REFERENCE.                                      |                          |                           |                      |                                   |
|---------------|---------------------------|-------------------|-------------------------------------------------------------------------|-------------------------------------------------|--------------------------|---------------------------|----------------------|-----------------------------------|
|               |                           |                   |                                                                         | Work.                                           | Vol.                     | P.                        | Pl.                  | Figs.                             |
| L. H.         | <u>2502</u> <sub>2</sub>  | Type.             | <b>Rensselæria</b> Hall— <i>Cont.</i><br>mutabilis.....Hall.<br>H. & C. | Pal. N. Y.<br>St. G. N. Y.<br>Pal. N. Y.<br>" " | 3<br>13<br>8, pt. 2<br>3 | 254<br>....<br>258<br>254 | 45<br>50<br>76<br>45 | 2d-i, n-p<br>1, 2<br>1, 2<br>2k-m |
| "             | <u>2502</u> <sub>1</sub>  | "                 | " .....Hall.                                                            | " "                                             | 3                        | 254                       | 45                   | 2k-m                              |
|               |                           |                   | <b>Retzia</b> King.<br>evax.....                                        | .....                                           | .....                    | .....                     | .....                | .....                             |
| L. H.         | <u>2417</u> <sub>2</sub>  | Type.             | <b>Rhipidomella</b> Oehlert.<br>assimilis.....Hall.                     | Pal. N. Y.                                      | 3                        | 175                       | 15                   | 1a-d                              |
| "             | <u>2417</u> <sub>1</sub>  | "                 | " ..... "                                                               | " "                                             | 3                        | 175                       | 15                   | 1e                                |
| Cl.           | 1513                      | "                 | circulus .....Hall.<br>H. & C.                                          | " "<br>" "                                      | 2<br>8, pt. 1            | 56<br>210                 | 20<br>6A             | 6a-e, g<br>1, 2                   |
| "             | "                         | "                 | " .....Hall.                                                            | " "                                             | 2                        | 56                        | 20                   | 6f, int.                          |
| L. H.         | 2413                      | "                 | discus.....Hall.                                                        | " "                                             | 3                        | 165                       | 10A                  | 7-10d                             |
| "             | "                         | "                 | " ..... "                                                               | " "                                             | 3                        | 165                       | 10A                  | 11, 12                            |
| "             | <u>2420</u> <sub>3</sub>  | "                 | eminens .....Hall.                                                      | N. Y. S. M.<br>Pal. N. Y.                       | 10<br>3                  | 42<br>167                 | ....<br>11           | 1<br>13                           |
| "             | <u>2420</u> <sub>1</sub>  | "                 | " ..... "                                                               | N. Y. S. M.<br>Pal. N. Y.                       | 10<br>3                  | 42<br>167                 | ....<br>11           | 2<br>8, 9, 12                     |
| Niag.         | <u>1766</u> <sub>2</sub>  | Fig'd.            | hybrida (Sow.)....Hall.                                                 | " "                                             | 2                        | 253                       | 52                   | 4a, c-h, o                        |
| "             | <u>1766</u> <sub>1</sub>  | "                 | " ..... "                                                               | " "                                             | 2                        | 253                       | 52                   | 4b, d. v.                         |
| "             | <u>1766</u> <sub>2</sub>  | "                 | " ..... "                                                               | " "                                             | 2                        | 253                       | 52                   | 4i, int.                          |
| "             | <u>1766</u> <sub>3a</sub> | "                 | " ..... "                                                               | " "                                             | 2                        | 253                       | 52                   | 4k-m                              |
|               |                           |                   | " ..... "                                                               | St. G. N. Y.                                    | 2                        | ....                      | 36                   | 4, 5                              |
|               |                           |                   | H. & C.                                                                 | " "                                             | 11                       | ....                      | 12                   | 3, int.v.v.                       |
|               |                           |                   | " ..... "                                                               | Pal. N. Y.                                      | 8, pt. 1                 | 210                       | 6                    | 4, 5                              |
| "             | <u>1766</u> <sub>1</sub>  | "                 | " (Sow.)....Hall.                                                       | " "                                             | 2                        | 253                       | 52                   | 4n, int.                          |
| "             | <u>1766</u> <sub>3</sub>  | "                 | " ..... "                                                               | N. Y. S. M.                                     | 28                       | 149                       | 21                   | 18-21,<br>24, 25                  |
| "             | "                         | "                 | " ..... "                                                               | " "                                             | 28                       | 149                       | 21                   | 22, 23                            |
| "             | <u>1766</u> <sub>3a</sub> | "                 | " ..... "                                                               | St. G. N. Y.                                    | 2                        | ....                      | 36                   | 1-3                               |
|               |                           |                   | H. & C.                                                                 | " "                                             | 11                       | ....                      | 12                   | 1, 2                              |
|               |                           |                   | " ..... "                                                               | Pal. N. Y.                                      | 8, pt. 1                 | 210                       | 6                    | 1-3                               |
| L. H.         | <u>2412</u> <sub>1</sub>  | Type.             | oblata.....Hall.                                                        | N. Y. S. M.<br>Pal. N. Y.                       | 10<br>3                  | 41<br>162                 | ....<br>10           | .....<br>1-10                     |
| "             | "                         | "                 | " ..... "                                                               | " "                                             | 3                        | 162                       | 10                   | 11-14                             |
| "             | "                         | "                 | " .....H. & C.                                                          | " "                                             | 8, pt. 1                 | 210                       | 6A                   | 4, int.                           |
| "             | "                         | "                 | " .....Hall.                                                            | " "                                             | 3                        | 162                       | 10                   | 15-17                             |
| "             | "                         | "                 | " .....H. & C.                                                          | " "                                             | 8, pt. 1                 | 210                       | 6A                   | 3, int.                           |
| "             | <u>2412</u> <sub>5</sub>  | "                 | " .....Hall.                                                            | " "                                             | 3                        | 162                       | 10                   | 19, 20                            |
| "             | <u>2412</u> <sub>1</sub>  | "                 | " ..... "                                                               | " "                                             | 3                        | 162                       | 10                   | 21, int.                          |
| "             | <u>2412</u> <sub>2</sub>  | "                 | " ..... "                                                               | " "                                             | 3                        | 162                       | 10                   | 22, "                             |
| "             | <u>2412</u> <sub>3</sub>  | "                 | " var. emarginata.H.                                                    | " "                                             | 3                        | 164                       | 10A                  | 4a-d                              |
| "             | "                         | "                 | " ..... "                                                               | " "                                             | 3                        | 164                       | 10A                  | 5a, b                             |
| "             | "                         | "                 | " ..... "                                                               | " "                                             | 3                        | 164                       | 10A                  | 6a, b                             |
| Cl.           | 1511                      | Type.             | trinucleus .....Hall.                                                   | " "                                             | 2                        | 58                        | 20                   | 8a, b                             |
| L. H.         | 2416                      | "                 | tubulostriata.....Hall.                                                 | N. Y. S. M.<br>Pal. N. Y.                       | 10<br>3                  | 42<br>166                 | ....<br>11           | .....<br>1-6                      |
|               |                           |                   | <b>Rhynchonella</b> Fischer.<br>abrupta.....                            | .....                                           | .....                    | .....                     | .....                | .....                             |
| Niag.         | 1942                      | Type.             | acinus.....Hall.                                                        | T. A. I.<br>N. Y. S. M.                         | 4<br>28                  | 215<br>163                | ....<br>26           | .....<br>7-11                     |
|               |                           |                   | acutiplicata .....                                                      | .....                                           | .....                    | .....                     | .....                | .....                             |



| LOCALITY.                                                                                    | REMARKS.                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Near Hudson, N. Y.<br>The Helderbergs, N. Y.<br>.....                                        | Six individuals, young and adult.<br>A very gibbous individual; ventral valve partly broken away.<br><br>See <i>Homæospira evax</i> .                                                                                                                                           |
| Schoharie, N. Y.<br>Clarksville, N. Y.<br>.....                                              | As <i>Orthis assimilis</i> . Small, somewhat exfoliated individual.<br>" " " Int. cast very large ventr. valve, imbedded.<br>" " <i>circulus</i> .                                                                                                                              |
| Reynale's Basin, N. Y.<br>" " "<br>Clarksville, N. Y.<br>" " "                               | A very perfect adult.<br>As <i>Orthis circulus</i> . Ventral valve worn down so as to show internal characters. May have come from Sodus, N. Y.<br>As <i>Orthis discus</i> . Four entire individuals.<br>" " " A ventral valve and internal cast of a dorsal valve.             |
| .....<br>Schoharie, N. Y.<br>.....                                                           | " " <i>eminens</i> .<br>" " " A very large, entire individual.<br>" " "                                                                                                                                                                                                         |
| Clarksville, N. Y.<br>Wolcott, N. Y.<br>Rochester, N. Y.<br>Wolcott, N. Y.<br>.....<br>..... | " " " Three entire individuals.<br>" " <i>hybrida</i> . Three individuals.<br>" " " Individual of medium size.<br>" " " Small ventral valve, imbedded<br>" " "<br>" " "                                                                                                         |
| Lockport, N. Y.<br>Rochester, N. Y.<br>Waldron, Ind.<br>" "                                  | A small dorsal and a large ventral valve.<br>As <i>Orthis hybrida</i> . Interior imprint small dorsal valve.<br>" " " Three individuals.<br>" " " A dors. and a ventr. valve; each shows interior.<br>" " "                                                                     |
| .....<br>Lockport, N. Y.<br>.....                                                            | A large, perfect individual.<br>As <i>Orthis oblata</i> .                                                                                                                                                                                                                       |
| Clarksville, N. Y.<br>.....                                                                  | " " " Ten entire individuals.<br>" " "                                                                                                                                                                                                                                          |
| Clarksville, ? N. Y.<br>.....                                                                | Four dorsal valves from Albany Co.<br>As <i>Orthis oblata</i> .                                                                                                                                                                                                                 |
| Clarksville, N. Y.<br>Catskill Creek, N. Y.<br>Near Clarksville, N. Y.                       | Three ventral valves.<br>Two internal casts of ventral valves, imbedded.<br>As <i>Orthis oblata</i> . Internal cast large dorsal valve, imbedded with                                                                                                                           |
| Near Hudson, N. Y.<br>Cumberland, Md.<br>" "<br>" "                                          | <i>O. (Orthostrophia) strophomenoides</i> , fig. 7c, pl. 23.<br>As <i>Orthis oblata</i> var. <i>emarginata</i> . Int. cast large dors. valve., imb.<br>" " " " " Three entire individuals, silicified.<br>" " " " " Two opposite valves, "<br>" " " " " Entire internal cast, " |
| Wayne Co., N. Y.<br>.....                                                                    | As <i>Orthis trinucleus</i> . Dorsal (?) valve, imbedded, and its imprint.<br>From Cental's Mill.<br>As <i>Orthis tubulostriata</i> .                                                                                                                                           |
| Clarksville, N. Y.<br>.....                                                                  | " " " Six indiv.; the orig. of fig. 4 is considerably broken.<br><br>See <i>Uncinulus abruptus</i> .                                                                                                                                                                            |
| Waldron, Ind.<br>.....                                                                       | Two entire individuals. Figs. enlarged to two, not four, diameters.<br>See <i>Stenoschisma formosum</i> .                                                                                                                                                                       |

Class BRACHIOPODA—*Continued.*

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                | REFERENCE.   |                           |       |       |                                   |
|------------------|------------------|-----------------------|-------------------------------------------|--------------|---------------------------|-------|-------|-----------------------------------|
|                  |                  |                       |                                           | Work.        | Vol.                      | P.    | Pl.   | Figs.                             |
|                  |                  |                       | <b>Rhynchonella</b> Fischer— <i>Cont.</i> |              |                           |       |       |                                   |
|                  |                  |                       | <i>æquivalvis</i> .....                   | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>altiplicata</i> .....                  | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>bialveata</i> .....                    | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>Campbellana</i> .....                  | .....        | .....                     | ..... | ..... | .....                             |
| Cl.              | 1786             | Type.                 | <i>emacerata</i> ..... Hall.              | Pal. N. Y.   | 2                         | 71    | 23    | 6a-c                              |
|                  |                  |                       | <i>eminens</i> .....                      | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>formosa</i> .....                      | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>indianensis</i> .....                  | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>mutabilis</i> .....                    | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>neglecta</i> .....                     | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>nobilis</i> .....                      | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>nucleolata</i> .....                   | .....        | .....                     | ..... | ..... | .....                             |
| Med.             | 1430             | Type.                 | <i>plicata</i> ..... Hall.                | Pal. N. Y.   | 2                         | 10    | 4     | 6, <i>d. v.</i>                   |
|                  |                  |                       | <i>pyramidata</i> .....                   | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>reticulata</i> .....                   | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>rudis</i> .....                        | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>Saffordi</i> .....                     | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>semiplicata</i> .....                  | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>Stricklandi</i> .....                  | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>sulcopicata</i> .....                  | .....        | .....                     | ..... | ..... | .....                             |
| Niag.            | $\frac{1939}{2}$ | Fig'd Sp.             | <i>tennesseensis</i> (Ræm.) H.            | Pal. O.      | 2                         | 136   | 7     | 16, 17                            |
|                  |                  |                       | <i>transversa</i> .....                   | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>vellicata</i> .....                    | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>ventricosa</i> .....                   | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>Whitii</i> .....                       | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <b>Rhynchospira</b> Hall.                 |              |                           |       |       |                                   |
|                  |                  |                       | <i>aprini formis</i> .....                | .....        | .....                     | ..... | ..... | .....                             |
|                  |                  |                       | <i>evax</i> .....                         | .....        | .....                     | ..... | ..... | .....                             |
| L. H.            | $\frac{2465}{3}$ | Gen. and<br>Sp. Type. | <i>formosa</i> ..... Hall.                | N. Y. S. M.  | 10                        | 88    | ..... | .....                             |
|                  |                  |                       | " .....                                   | Pal. N. Y.   | 3                         | 215   | 36    | 2a-t                              |
|                  |                  |                       | " .....                                   | N. Y. S. M.  | 12                        | 29    | ..... | .....                             |
|                  |                  |                       | H. & C.                                   | St. G. N. Y. | 13                        | ..... | 36    | 8, <i>d. v.</i>                   |
|                  |                  |                       | " .....                                   | Pal. N. Y.   | 8, pt. 2                  | 110   | 50    | 21, "                             |
| "                | $\frac{2465}{1}$ | "                     | " ..... Hall.                             | " "          | 3                         | 485   | 95A   | 8-11                              |
|                  |                  |                       | H. & C.                                   | St. G. N. Y. | 13                        | ..... | 36    | <sup>12,</sup><br><i>int.</i> × 2 |
|                  |                  |                       | " .....                                   | Pal. N. Y.   | 8, pt. 2                  | 110   | 50    | <sup>25,</sup><br><i>int.</i> × 2 |
| "                | $\frac{2464}{2}$ | Type.                 | <i>globosa</i> ..... Hall.                | N. Y. S. M.  | 10                        | 87    | ..... | .....                             |
|                  |                  |                       | " .....                                   | Pal. N. Y.   | 3                         | 215   | 36    | 1a-p                              |
| "                | 2466             |                       | <i>rectirostra</i> ..... Hall.            | N. Y. S. M.  | 10                        | 89    | ..... | .....                             |
|                  |                  |                       | " .....                                   | Pal. N. Y.   | 3                         | 217   | ..... | .....                             |
|                  |                  |                       | " .....                                   | " "          | 3                         | 485   | 95A   | 1a-c                              |
|                  |                  |                       | <b>Rhynchotreta</b> Hall.                 |              |                           |       |       |                                   |
| L. H.            | 2489             | Type.                 | <i>bialveata</i> ..... Hall.              | N. Y. S. M.  | 10                        | 73    | ..... | .....                             |
|                  |                  |                       | " .....                                   | Pal. N. Y.   | 3                         | 233   | 34    | 1-4                               |
|                  |                  |                       | <i>cuneata</i> (Dalman),                  |              |                           |       |       |                                   |
| Niag.            | $\frac{1545}{3}$ | Gen. and<br>Sp. Type. | <i>var. Americana</i> Hall.               | N. Y. S. M.  | <sup>28,</sup><br>2d ed.  | 167   | 25    | 29-38                             |
|                  |                  |                       | " .....                                   | " "          | <sup>28,</sup><br>1st ed. | ..... | 25    | 29-38                             |
|                  |                  |                       | H. & C.                                   | St. G. N. Y. | 13                        | ..... | 42    | 17, 18                            |
|                  |                  |                       | " .....                                   | Pal. N. Y.   | 8, pt. 2                  | 187   | 56    | 31-34                             |
| "                | $\frac{1545}{2}$ | Fig'd.                | " " " Hall.                               | " "          | 2                         | 276   | 57    | 4a, f, e, i, p                    |
| "                | 1783             | "                     | " " " "                                   | " "          | 2                         | 276   | 57    | 3a-h                              |



| LOCALITY.              | REMARKS.                                                                                      |
|------------------------|-----------------------------------------------------------------------------------------------|
| .....                  | See <i>Lissopleura æquivalvis</i> .                                                           |
| .....                  | “ <i>Stenoschisma altiplicatum</i> .                                                          |
| .....                  | “ <i>Rhynchotreta bialveata</i> .                                                             |
| .....                  | “ <i>Uncinulus Campbellanus</i> .                                                             |
| Wayne Co., N. Y.       | As <i>Atrypa emacerata</i> . Two imperfect casts, imbedded together.<br>From Shakers' Mill.   |
| .....                  | See <i>Uncinulus eminens</i> .                                                                |
| .....                  | “ <i>Stenoschisma formosum</i> .                                                              |
| .....                  | “ <i>Camarotæchia indianensis</i> .                                                           |
| .....                  | “ <i>Uncinulus mutabilis</i> .                                                                |
| .....                  | “ <i>Camarotæchia neglecta</i> .                                                              |
| .....                  | “ <i>Uncinulus nobilis</i> .                                                                  |
| .....                  | “ “ <i>nucleolatus</i> .                                                                      |
| Medina, N. Y.          | As <i>Atrypa plicata</i> . Exterior-interior imprint dorsal valve.                            |
| .....                  | See <i>Uncinulus pyramidatus</i> .                                                            |
| .....                  | “ <i>Eichwaldia reticulata</i> .                                                              |
| .....                  | “ <i>Rhynchotreta rudis</i> .                                                                 |
| .....                  | “ <i>Wilsonia Saffordi</i> .                                                                  |
| .....                  | “ <i>Camarotæchia semiplicata</i> .                                                           |
| .....                  | “ <i>Uncinulus Stricklandi</i> .                                                              |
| .....                  | “ <i>Camarotæchia sulcopolicata</i> .                                                         |
| Greenville, O.         | Internal cast, nearly entire. See also <i>Uncinulus Stricklandi</i> .                         |
| .....                  | See <i>Uncinulus transversus</i> .                                                            |
| .....                  | “ “ <i>vellicatus</i> .                                                                       |
| .....                  | “ <i>Wilsonia ventricosa</i> .                                                                |
| .....                  | “ <i>Camarotæchia Whitii</i> .                                                                |
| .....                  | “ <i>Homæospira apriniformis</i> .                                                            |
| .....                  | “ “ <i>evax</i> .                                                                             |
| .....                  | As <i>Waldheimia formosa</i> .                                                                |
| .....                  | “ <i>Trematospira</i> “                                                                       |
| .....                  | Made the type of the genus <i>Rhynchospira</i> .                                              |
| TheHelderbergs, N.Y.   | A series of eleven individuals.                                                               |
| Nr. Clarksville, N. Y. | Five weathered and etched fragments.                                                          |
| .....                  | As <i>Waldheimia globosa</i> .                                                                |
| TheHelderbergs, N.Y.   | “ <i>Trematospira</i> “ A series of seven individuals.                                        |
| .....                  | “ <i>Waldheimia rectirostra</i> .                                                             |
| .....                  | “ <i>Trematospira</i> “                                                                       |
| Cumberland, Md.        | Entire adult. Another specimen, unfigured, is in the type series.                             |
| .....                  | As <i>Rhynchonella</i> (?) <i>bialveata</i> .                                                 |
| TheHelderbergs, N.Y.   | “ “ “ Five individuals.                                                                       |
| .....                  | “ <i>Rhyncotreta cuneata</i> . Type of genus.                                                 |
| Waldron, Ind.          | Seven individuals.                                                                            |
| Lockport, N. Y.        | As <i>Atrypa cuneata</i> Dalm. Two individuals.                                               |
| “ “                    | “ “ <i>bidentata</i> His., probably the young of this variety. Two<br>very small individuals. |

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.        | GENUS, SPECIES AND AUTHOR.                                                                                                              | REFERENCE.                                                     |                                |                                    |                               |                                           |
|---------------|------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|--------------------------------|------------------------------------|-------------------------------|-------------------------------------------|
|               |                  |                          |                                                                                                                                         | Work.                                                          | Vol.                           | P.                                 | Pl.                           | Figs.                                     |
| L. H.         | <u>2491</u><br>1 | Type.                    | <b>Rhynchotreta</b> Hall— <i>Cont.</i><br>? rudis.....Hall.<br>" "                                                                      | N. Y. S. M.<br>Pal. N. Y.                                      | 10<br>3                        | 75<br>235                          | .....<br>34                   | .....<br>20a-c                            |
| Guelph        | 2219             | Fig'd Sp. and Gen. Type. | <b>Rhynobolus</b> Hall.<br>galtensis ( <i>Bill</i> )....Hall.<br>H. & C.<br>" "                                                         | N. Y. S. M.<br>St. G. N. Y.<br>Pal. N. Y.                      | 23<br>11<br>8, pt. 1           | 247<br>240<br>44                   | 13<br>2<br>4B                 | 10<br>7<br>7                              |
| L. H.         | 2424             | Gen. and Sp. Type.       | <b>Scenidium</b> Hall.<br>insigne .....Hall.<br>" "<br>" "<br>H. & C.<br>" "                                                            | " "<br>N. Y. S. M.<br>St. G. N. Y.<br>" "<br>Pal. N. Y.        | 3<br>13<br>2<br>11<br>8, pt. 1 | 173<br>70<br>.....<br>.....<br>241 | 10A<br>.....<br>37<br>8<br>7  | 13-15<br>1-5<br>31-35<br>23, 24<br>31-35  |
| Niag.         | 1767             | Type.                    | pyramidale.....Hall.<br>" "<br>" "<br>" "<br>H. & C.                                                                                    | " "<br>" "<br>St. G. N. Y.<br>Pal. N. Y.                       | 2<br>2<br>2<br>8, pt. 1        | 251<br>251<br>.....<br>242         | 52<br>52<br>37<br>7           | 2a-d<br>2e-i<br>29, 30<br>29, 30          |
| L. H.         | 2421             | Type.                    | <b>Schizophoria</b> King.<br>multistriata.....Hall.<br>" "<br>H. & C.                                                                   | N. Y. S. M.<br>Pal. N. Y.<br>" "                               | 10<br>3<br>8, pt. 1            | 45<br>176<br>212                   | .....<br>15<br>6A             | .....<br>2a-f, k-t<br>25,<br>int. d. v.   |
| "             | <u>2415</u><br>1 | "                        | ? peduncularis.....Hall.                                                                                                                | " "                                                            | 3                              | 174                                | 13                            | 16a, b                                    |
| L. H.         | <u>2498</u><br>1 | Fig'd.                   | <b>Sieberella</b> Oehlert.<br>galeata ( <i>Dalm.</i> )...Hall.<br>H. & C.<br>" "                                                        | " "<br>St. G. N. Y.<br>Pal. N. Y.                              | 3<br>13<br>8, pt. 2            | 257<br>.....<br>247                | 46<br>48<br>72                | 1a-z<br>16, d. v.<br>10, 11               |
| "             | "                | "                        | " " Hall.                                                                                                                               | " "                                                            | 3                              | 257                                | 47                            | 1a                                        |
| "             | "                | "                        | " " "                                                                                                                                   | " "                                                            | 3                              | 257                                | 47                            | 1b-f                                      |
| "             | "                | "                        | " " H. & C.                                                                                                                             | St. G. N. Y.                                                   | 13                             | .....                              | 48                            | 17, int.                                  |
| "             | "                | "                        | " " "                                                                                                                                   | Pal. N. Y.                                                     | 8, pt. 2                       | 247                                | 72                            | 12, "                                     |
| "             | "                | "                        | " ( <i>Dalm.</i> )...Hall.<br>H. & C.                                                                                                   | " "<br>" "                                                     | 3<br>8, pt. 2                  | 257<br>247                         | 47<br>72                      | 1g-i<br>13, card.                         |
| Cl.           | 2063             | Type.                    | nucleus.....H. & W.<br>H. & C.                                                                                                          | N. Y. S. M.<br>Pal. N. Y.                                      | 24<br>8, pt. 2                 | 200a<br>247                        | .....<br>72                   | .....<br>1-3                              |
| L. H.         | <u>2499</u><br>1 | "                        | pseudogaleata .....Hall.<br>" "                                                                                                         | N. Y. S. M.<br>Pal. N. Y.                                      | 10<br>3                        | 106<br>259                         | .....<br>48                   | .....<br>2b-g, k, l                       |
| "             | <u>2499</u><br>3 | "                        | " " .....<br>H. & C.                                                                                                                    | " "<br>" "                                                     | 3<br>8, pt. 2                  | 259<br>242                         | 48<br>72                      | 2h, i<br>14, side                         |
|               |                  |                          | <b>Skenidium</b> Hall.                                                                                                                  | .....                                                          | .....                          | .....                              | .....                         | .....                                     |
| Niag.         | <u>1773</u><br>2 | Type.                    | <b>Spirifer</b> Sowerby.<br>bicostatus, <i>Vanux.</i> ( <i>H.</i> )<br><i>biforata</i> , var. <i>lynx</i> .....<br><i>bilobus</i> ..... | Pal. N. Y.<br>.....<br>.....                                   | 2<br>.....<br>.....            | 263<br>.....<br>.....              | 54<br>.....<br>.....          | 4a-e<br>.....<br>.....                    |
| L. H.         | <u>2446</u><br>2 | Type.                    | concinus.....Hall.<br>" "<br>" "<br>H. & C.<br>" "                                                                                      | N. Y. S. M.<br>Pal. N. Y.<br>St. G. N. Y.<br>" "<br>Pal. N. Y. | 10<br>3<br>2<br>13<br>8, pt. 2 | 60<br>200<br>.....<br>.....<br>27  | .....<br>25<br>55<br>27<br>30 | .....<br>2a-f<br>1, d. v.<br>4, "<br>1, " |
| "             | <u>2446</u><br>1 | "                        | " " .....Hall.                                                                                                                          | " "                                                            | 3                              | 200                                | 25                            | 2g-i<br>7a, b                             |



| LOCALITY.               | REMARKS.                                                                                       |
|-------------------------|------------------------------------------------------------------------------------------------|
| .....<br>Hudson, N. Y.  | As <i>Rhynchonella rudis</i> .<br>" " " " An adult with beak gone.                             |
| .....                   | " <i>Rhynobolus</i> sp.?                                                                       |
| Galt, Ont.              | Internal cast of ventral valve in crystalline limestone.                                       |
| .....                   | As <i>Orthis insignis</i> .                                                                    |
| .....                   | Made type of genus.                                                                            |
| Near Clarksville, N. Y. | Two entire individuals and two opposite, detached valves.                                      |
| Lockport, N. Y.         | As <i>Orthis pyramidalis</i> . Very young individual, somewhat crushed.                        |
| .....                   | " " " "                                                                                        |
| .....                   | " <i>Scenidium pyramidata</i> , by error.                                                      |
| Lockport, N. Y.         | Entire adult. Enlargements are to 1 1/2 diam.                                                  |
| .....                   | Error for <i>Scenidium pyramidale</i> , q. v.                                                  |
| .....                   | As <i>Orthis multistriata</i> .                                                                |
| .....                   | " " " "                                                                                        |
| Eastern New York.       | Six entire individuals and internal casts from Catskill Creek, Schoharie and near Clarksville. |
| Clarksville, N. Y.      | As <i>Orthis peduncularis</i> . An imperfect ventral valve.                                    |
| .....                   | As <i>Pentamerus galeatus</i> .                                                                |
| The Helderbergs, N. Y.  | Fourteen more or less exfoliated individuals of all sizes and an imbedded dorsal valve.        |
| " " "                   | As <i>Pentamerus galeatus</i> . Individ., with beak of dorsal valve gone.                      |
| .....                   | " " " "                                                                                        |
| The Helderbergs, N. Y.  | Five specimens showing the internal characters of the shell.                                   |
| .....                   | As <i>Pentamerus galeatus</i> .                                                                |
| The Helderbergs, N. Y.  | Entire internal cast of a large individual.                                                    |
| .....                   | As <i>Pentamerus nucleus</i> .                                                                 |
| Near Louisville, Ky.    | Individual of average size.                                                                    |
| .....                   | As <i>Pentamerus pseudogaleatus</i> .                                                          |
| Schoharie, N. Y.        | " " " " Two indiv. and a large internal cast.                                                  |
| .....                   | " " " "                                                                                        |
| The Helderbergs, N. Y.  | An adult.                                                                                      |
| .....                   | See <i>Scenidium</i> .                                                                         |
| Vernon Centre, N. Y.    | An individual lacking the beak of the dorsal valve.                                            |
| .....                   | See <i>Platystrophia lynx</i> .                                                                |
| .....                   | " <i>Bilobites bilobus</i> .                                                                   |
| Nr. Clarksville, N. Y.  | An entire adult.                                                                               |
| Schoharie, N. Y.        | Two entire individuals and an imbedded ventral valve.                                          |

Class BRACHIOPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.            | REFERENCE.   |             |      |        |                                |
|------------------|------------------|----------------------|---------------------------------------|--------------|-------------|------|--------|--------------------------------|
|                  |                  |                      |                                       | Work.        | Vol.        | P.   | Pl.    | Figs.                          |
| L. H.            | <u>2446</u><br>3 | Type.                | <b>Spirifer</b> Sowerby— <i>Cont.</i> |              |             |      |        |                                |
|                  |                  |                      | concinus . . . . . Hall.              | St. G. N. Y. | 2           | .... | 55     | 2, card.                       |
| Niag.            | 1834             | "                    | " " " H. & C.                         | " "          | 13          | .... | 27     | 5, "                           |
|                  |                  |                      | crispatus . . . . . H. & C.           | Pal. N. Y.   | 8, pt. 2    | 27   | 30     | 2, "                           |
| "                | <u>1771</u><br>1 | Fig'd.               | " " " Hall.                           | " "          | " "         | 360  | 36     | 9, 10                          |
|                  |                  |                      | crispus (His.) . . . . . Hall.        | St. G. N. Y. | 2           | .... | 61     | 9, 10                          |
| Cor.             | <u>1771</u><br>4 | "                    | " " " "                               | " "          | 14          | 355  | 7      | 12, 13                         |
| "                | "                | "                    | " " " "                               | Pal. N. Y.   | 2           | 262  | 54     | 3a-k                           |
| Niag.            | <u>1771</u><br>5 | "                    | " " " "                               | " "          | 2           | 327  | 74     | 7, 8d                          |
| "                | "                | "                    | " " " "                               | " "          | 2           | 328  | 74     | 9d, e, f                       |
| "                | "                | Type.                | " " " "                               | N. Y. S. M.  | 28          | 157  | 24     | 6-12                           |
|                  |                  |                      | " " " " H. & C.                       | St. G. N. Y. | 2           | .... | 61     | 4, enl. X 2                    |
| "                | "                | "                    | " " " " H. & C.                       | Pal. N. Y.   | 8, pt. 2    | 19   | 36     | 4, "                           |
|                  |                  |                      | " var. simplex. Hall.                 | N. Y. S. M.  | 28, 2d ed.  | 157  | 24     | I-5                            |
| L. H.            | <u>2444</u><br>4 | Type.                | " " " "                               | T. A. I.     | 4           | 212  | ....   | ....                           |
|                  |                  |                      | crispus, var. . . . .                 | N. Y. S. M.  | 28, 1st ed. | .... | 24     | I-5                            |
| "                | <u>2444</u><br>3 | "                    | cycloptera . . . . . Hall.            | " "          | " "         | " "  | " "    | " "                            |
|                  |                  |                      | " " " "                               | N. Y. S. M.  | 10          | 58   | " "    | " "                            |
| "                | "                | "                    | " " " "                               | Pal. N. Y.   | 3           | 199  | 25     | { ra-d, f, h,<br>l, p, r, s, u |
|                  |                  |                      | " " " "                               | " "          | 3           | 199  | 25     | e, i, k, m, o                  |
| "                | "                | "                    | " " " "                               | St. G. N. Y. | 2           | .... | 61     | 12, d. v.                      |
|                  |                  |                      | " " " " H. & C.                       | " "          | 13          | .... | 25     | 6, "                           |
| "                | "                | "                    | " " " " Hall.                         | Pal. N. Y.   | 8, pt. 2    | 36   | 36     | 12, "                          |
|                  |                  |                      | " " " " H. & C.                       | St. G. N. Y. | 2           | .... | 61     | 13, int.                       |
| Niag.            | <u>1935</u><br>2 | "                    | eudora . . . . . Hall.                | Pal. N. Y.   | 8, pt. 2    | 36   | 36     | 13, "                          |
| "                | "                | "                    | " " " "                               | Geol. Wis.   | 1861        | 25   | " "    | " "                            |
|                  |                  |                      | " " " "                               | " "          | 1           | 69   | ct. 16 | 5, d. v.                       |
| "                | "                | "                    | " " " "                               | N. Y. S. M.  | 20          | 370  | 13     | 5, 7                           |
|                  |                  |                      | " " " "                               | St. G. N. Y. | 2           | .... | 51     | 19, 20                         |
| "                | <u>1935</u><br>1 | "                    | " " " " H. & C.                       | Pal. N. Y.   | 8, pt. 2    | 13   | 21     | 19, 20                         |
|                  |                  |                      | " " " " Hall.                         | N. Y. S. M.  | 28          | 156  | 24     | 13-17                          |
| "                | "                | "                    | " " " " H. & C.                       | St. G. N. Y. | 2           | .... | 51     | 21, 29                         |
|                  |                  |                      | " " " " Hall.                         | " "          | 13          | .... | 23     | 5, 6                           |
| "                | "                | "                    | " " " " Hall.                         | Pal. N. Y.   | 8, pt. 2    | 13   | 21     | 21, 29                         |
|                  |                  |                      | " " " " Hall.                         | N. Y. S. M.  | 28          | 156  | 24     | 18, int.                       |
| "                | 2054             | "                    | gibbosus . . . . .                    | Geol. Wis.   | 1861        | 25   | " "    | " "                            |
| L. H.            | <u>2440</u><br>1 | Fig'd.               | inconstans . . . . .                  | N. Y. S. M.  | 20          | 370  | 13     | 6, 8                           |
|                  |                  |                      | macropleura (Con.). Hall.             | " "          | " "         | " "  | " "    | " "                            |
| "                | <u>2440</u><br>6 | "                    | " " " " H. & C.                       | Pal. N. Y.   | 3           | 202  | 27     | Ib-i                           |
|                  |                  |                      | " " " " H. & C.                       | St. G. N. Y. | 2           | .... | 51     | 22, d. v.                      |
| "                | <u>2440</u><br>2 | "                    | " " " " (Con.). Hall.                 | " "          | 13          | .... | 23     | 8, "                           |
|                  |                  |                      | " " " " Hall.                         | Pal. N. Y.   | 8, pt. 2    | 13   | 21     | 22, "                          |
| "                | <u>2440</u><br>6 | "                    | " " " " Hall.                         | " "          | 3           | 202  | 27     | 11, int.                       |
| "                | <u>2440</u><br>4 | "                    | " " " " Hall.                         | " "          | 3           | 202  | 27     | Im, "                          |
| "                | <u>2440</u><br>6 | "                    | " " " " Hall.                         | " "          | 3           | 202  | 27     | In, "                          |
| "                | <u>2440</u><br>4 | "                    | " " " " Hall.                         | " "          | 3           | 202  | 27     | 10, v. v.                      |
| "                | <u>2440</u><br>6 | "                    | " " " " Hall.                         | " "          | 3           | 202  | 28     | 8a, int.                       |
| "                | "                | "                    | " " " " Hall.                         | St. G. N. Y. | 2           | .... | 51     | 24, "                          |
|                  |                  |                      | " " " " H. & C.                       | " "          | 13          | .... | 23     | 9, "                           |
| "                | <u>2440</u><br>3 | "                    | " " " " (Con.). Hall.                 | Pal. N. Y.   | 8, pt. 2    | 13   | 21     | 24, "                          |
|                  |                  |                      | " " " " Hall.                         | " "          | 3           | 202  | 28     | 8b, c                          |
| "                | <u>2440</u><br>6 | "                    | " " " " Hall.                         | " "          | 3           | 202  | 28     | 8d, enl.                       |
| "                | "                | "                    | " " " " Hall.                         | St. G. N. Y. | 2           | .... | 51     | 27, "                          |
|                  |                  |                      | " " " " H. & C.                       | Pal. N. Y.   | 8, pt. 2    | 13   | 21     | 27, "                          |
| "                | "                | "                    | meta . . . . .                        | " "          | " "         | " "  | " "    | " "                            |
|                  |                  |                      | " " " "                               | " "          | " "         | " "  | " "    | " "                            |



| LOCALITY.              | REMARKS.                                                                                                             |
|------------------------|----------------------------------------------------------------------------------------------------------------------|
| Near Hudson, N. Y.     | Ventral valve, imbedded.                                                                                             |
| Cumberland, Md.        | As <i>Spirifer</i> sp. ?. An entire adult.                                                                           |
| Lockport, N. Y.        | Four entire individuals.                                                                                             |
| Schoharie, N. Y.       | As <i>Spirifer</i> sp. Two individuals, imbedded separately.                                                         |
| “ “                    | A small individual, almost entire.                                                                                   |
| Waldron, Ind.          | Three entire individuals.                                                                                            |
| “ “                    | A detached dorsal valve.                                                                                             |
| .....                  | As <i>Spirifer crispus</i> , var.                                                                                    |
| Waldron, Ind.          | “ “ “ “ Entire. The figures are enlargements × 2.                                                                    |
| .....                  | See “ “ “ <i>simplex</i> .                                                                                           |
| Clarksville, N. Y.     | Six entire individuals and one ventral valve.                                                                        |
| Schoharie, N. Y.       | Three entire individuals of small and medium size.                                                                   |
| “ “                    | The central portion of a ventral valve.                                                                              |
| Racine, Wis.           | Internal cast of a large individual.                                                                                 |
| Waldron, Ind.          | An entire, very perfect individual.                                                                                  |
| “ “                    | A nearly entire ventral valve, imbedded                                                                              |
| Racine, Wis.           | Upper part of an internal cast of medium size                                                                        |
| .....                  | See <i>Spirifer nobilis</i> .                                                                                        |
| Schoharie, N. Y.       | Three entire individuals.                                                                                            |
| Near Hudson, N. Y.     | A nearly entire internal cast, imbedded.                                                                             |
| The Helderbergs, N. Y. | Middle portion of a large ventral valve.                                                                             |
| Near Hudson, N. Y.     | Internal cast of ventral valve, not perfect.                                                                         |
| Southwestern Pa.       | Entire internal cast showing parts of spires ; silicified.                                                           |
| Near Hudson, N. Y.     | A somewhat broken internal cast of a ventral valve.                                                                  |
| Catskill Creek, N. Y.  | Internal casts of two large ventral valves ; one is imbedded.                                                        |
| Near Hudson, N. Y.     | Part of a very sharp imprint of the exterior of a large valve. The figure was not made from the original of fig. 22. |
| .....                  | See <i>Cyrtia meta</i> .                                                                                             |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.                                                                     | Type or Fig'd Sp. | GENUS, TYPE AND SPECIES.              | REFERENCE.   |          |      |        |                |
|---------------|------------------------------------------------------------------------------|-------------------|---------------------------------------|--------------|----------|------|--------|----------------|
|               |                                                                              |                   |                                       | Work.        | Vol.     | P.   | Pl.    | Figs.          |
| L. H.         | <u>2441</u><br>1                                                             | Type.             | <b>Spirifer</b> Sowerby— <i>Cont.</i> |              |          |      |        |                |
|               |                                                                              |                   | modestus.....Hall.                    | N. Y. S. M.  | 10       | 61   |        |                |
|               |                                                                              |                   | “ “ H. & C.                           | Pal. N. Y.   | 3        | 203  | 28     | 1a-f           |
| Niag.         | <u>1770</u><br>1                                                             | Fig'd.            | multistriatus.                        | “ “          | 8, pt. 2 | 19   | 38     | 1, 3           |
|               |                                                                              |                   | niagarensis, (Con.) Hall.             | Pal. N. Y.   | 2        | 264  | 54     | 5a-i, n-p      |
|               |                                                                              |                   | “ “ “                                 | “ “          | 2        | 264  | 54     | 5k, s, t       |
|               |                                                                              |                   | “ “ “                                 | “ “          | 2        | 264  | 54     | 5l             |
|               |                                                                              |                   | “ “ “                                 | “ “          | 2        | 264  | 54     | 5m, d. v.      |
|               |                                                                              |                   | “ “ “                                 | “ “          | 2        | 264  | 54     | 5r, int.       |
|               |                                                                              |                   | “ “ “                                 | St. G. N. Y. | 2        | .... | 51     | 3, “           |
|               |                                                                              |                   | “ “ “ H. & C.                         | Pal. N. Y.   | 8, pt. 2 | 14   | 21     | 3, “           |
|               |                                                                              |                   | nobilis, (Barr.)...Hall.              | Geol. Wis.   | 1861     | 26   | ....   | ....           |
|               |                                                                              |                   | “ “ “                                 | N. Y. S. M.  | 20       | 372  | 13     | 14             |
|               |                                                                              |                   | “ “ “ H. & C.                         | St. G. N. Y. | 13       | .... | 23     | 14             |
|               |                                                                              |                   | “ “ “                                 | Pal. N. Y.   | 8, pt. 2 | 35   | 37     | 3              |
| L. H.         | 2445                                                                         | Type.             | octocostatus.....Hall.                | Geol. Wis.   | 1        | 69   | ct. 16 | 6, v. v.       |
|               |                                                                              |                   | “ “ “                                 | N. Y. S. M.  | 20       | 372  | 13     | 16, 17         |
|               |                                                                              |                   | “ “ “                                 | “ “          | 10       | 62   |        |                |
|               |                                                                              |                   | “ “ “                                 | Pal. N. Y.   | 3        | 205  | 28     | 4a-e           |
|               |                                                                              |                   | perlamellosus.....Hall.               | N. Y. S. M.  | 10       | 57   |        |                |
|               |                                                                              |                   | “ “ “                                 | Pal. N. Y.   | 3        | 201  | 26     | 1a-t           |
|               |                                                                              |                   | “ “ “                                 | St. G. N. Y. | 2        | .... | 60     | 10, 11         |
|               |                                                                              |                   | “ “ “ H. & C.                         | Pal. N. Y.   | 8, pt. 2 | 14   | 35     | 10, 11         |
|               |                                                                              |                   | “ “ “                                 | “ “          | 3        | 201  | 26     | 2a-g           |
|               |                                                                              |                   | “ “ “                                 | St. G. N. Y. | 2        | .... | 60     | 7, d. v.       |
|               |                                                                              |                   | “ “ “ H. & C.                         | “ “          | 13       | .... | 24     | 7, “           |
|               |                                                                              |                   | “ “ “                                 | Pal. N. Y.   | 8, pt. 2 | 14   | 35     | 7, “           |
| Cl. Niag.     | <u>1527</u><br>1<br><u>1527</u><br>3<br><u>1527</u><br>4<br><u>1527</u><br>3 | Fig'd.            | plicatellus, var. radiatus.           | ....         | ....     | .... | ....   | ....           |
|               |                                                                              |                   | radiatus, (Sow.)...Hall.              | Pal. N. Y.   | 2        | 66   | 22     | 2k-r           |
|               |                                                                              |                   | “ “ “                                 | “ “          | 2        | 265  | 54     | 6a, b          |
|               |                                                                              |                   | “ “ “                                 | “ “          | 2        | 265  | 54     | 6c, g, h       |
|               |                                                                              |                   | “ “ “                                 | “ “          | 2        | 265  | 54     | 6d, int. v. v. |
|               |                                                                              |                   | “ “ “                                 | St. G. N. Y. | 2        | .... | 51     | 9, “           |
|               |                                                                              |                   | “ “ “ H. & C.                         | Pal. N. Y.   | 8, pt. 2 | 13   | 21     | 9, “           |
|               |                                                                              |                   | “ “ “ (Sow.)...Hall.                  | “ “          | 2        | 265  | 54     | 6e, card.      |
|               |                                                                              |                   | “ “ “                                 | St. G. N. Y. | 2        | .... | 51     | 10, “          |
|               |                                                                              |                   | “ “ “ H. & C.                         | Pal. N. Y.   | 8, pt. 2 | 13   | 21     | 10, “          |
|               |                                                                              |                   | “ “ “ (Sow.)...Hall.                  | N. Y. S. M.  | 28       | 157  | 24     | 20-27, 30      |
|               |                                                                              |                   | “ “ “                                 | St. G. N. Y. | 2        | .... | 51     | 11, 26         |
| “             | “                                                                            | “                 | “ “ “ H. & C.                         | “ “          | 13       | .... | 23     | 1, d. v.       |
|               |                                                                              |                   | “ “ “                                 | Pal. N. Y.   | 8, pt. 2 | 13   | 21     | 11, 26         |
|               |                                                                              |                   | “ “ “ (Sow.)...Hall.                  | N. Y. S. M.  | 28       | 157  | 24     | 28, 29         |
|               |                                                                              |                   | “ “ “                                 | St. G. N. Y. | 2        | .... | 51     | 12, 13         |
|               |                                                                              |                   | “ “ “ H. & C.                         | “ “          | 13       | .... | 23     | 2, 3           |
|               |                                                                              |                   | “ “ “                                 | Pal. N. Y.   | 8, pt. 2 | 13   | 21     | 12, 13         |
|               |                                                                              |                   | “ “ “ (Sow.)?..Hall.                  | N. Y. S. M.  | 20       | 371  | 13     | 9-11           |
|               |                                                                              |                   | “ “ “                                 | St. G. N. Y. | 2        | .... | 51     | 15, 16         |
|               |                                                                              |                   | “ “ “ H. & C.                         | Pal. N. Y.   | 8, pt. 2 | .... | 21     | 15, 16         |
|               |                                                                              |                   | “ “ “                                 | “ “          | “ “      | “ “  | “ “    | “ “            |
|               |                                                                              |                   | “ “ “                                 | “ “          | “ “      | “ “  | “ “    | “ “            |
|               |                                                                              |                   | “ “ “                                 | “ “          | “ “      | “ “  | “ “    | “ “            |



| LOCALITY.                | REMARKS.                                                                                                                    |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Cumberland, Md.          | Two individuals and a ventral valve ; silicified.                                                                           |
| .....<br>Lockport, N. Y. | See <i>Trematospira multistriata</i> .                                                                                      |
| " "                      | Four individuals, more or less entire. Original of fig. 5c doubtful.                                                        |
| " "                      | Rather flat ventral valve, imbedded.                                                                                        |
| " "                      | Internal cast of a dorsal valve.                                                                                            |
| Rochester, N. Y.         | Large individual, somewhat crushed and weathered.                                                                           |
| Lockport, N. Y.          | Middle part of a ventral valve.                                                                                             |
| .....                    | Part of a ventral valve showing muscular imprint.                                                                           |
| .....                    | As type of <i>Spirifer inconstans</i> Hall.                                                                                 |
| Racine, Wis.             | Internal cast of a dorsal valve.                                                                                            |
| .....                    | As <i>Spirifer inconstans</i> Hall.                                                                                         |
| Racine, Wis.             | Internal cast of a large individual.                                                                                        |
| Nr. Cumberland, Md.      | Siliceous casts of three individuals and a ventral valve.                                                                   |
| Clarksville, N. Y.       | Thirteen nearly perfect, entire indiv., one of which is imbedded.                                                           |
| " "                      | Two small ventral valves, two entire and one partial internal cast,<br>and one entire internal cast retaining dorsal valve. |
| " "                      | An unsymmetrical, entire adult.                                                                                             |
| " "                      | Two dorsal valves.                                                                                                          |
| " "                      | A large ventral valve.                                                                                                      |
| .....                    | Species queried.                                                                                                            |
| Clarksville, N. Y.       | As <i>Spirifer raricosta</i> Con. An entire individual.                                                                     |
| .....                    | See <i>Spirifer radiatus</i> .                                                                                              |
| Lockport, N. Y.          | Two individuals, somewhat exfoliated.                                                                                       |
| Wayne Co., N. Y.         | Young, entire individual. From " Marshall's Mill."                                                                          |
| Lockport, N. Y.          | A much flattened ventral valve.                                                                                             |
| Wayne Co., N. Y.         | Int. cast ventr. valve retaining some shell. Fr. " Marshall's Mill."                                                        |
| " "                      | Crushed individual. From " Marshall's Mill."                                                                                |
| Waldron, Ind.            | One small and two large individuals, entire.                                                                                |
| " "                      | Two large opposite valves showing internal features.                                                                        |
| .....                    | As <i>Spirifer plicatella</i> (Linn.), var. <i>radiata</i> Sow.                                                             |
| Racine, Wis.             | Internal cast of a small individual.                                                                                        |

Class BRACHIOPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No. | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.    | REFERENCE.   |               |      |        |                        |
|------------------|-------------|----------------------|-------------------------------|--------------|---------------|------|--------|------------------------|
|                  |             |                      |                               | Work.        | Vol.          | P.   | Pl.    | Figs.                  |
| Niag.            | 2053a       | Fig'd.               | <b>Spirifer Sowerby—Cont.</b> |              |               |      |        |                        |
|                  |             |                      | radiatus (Sow.) ?...Hall.     | N. Y. S. M.  | 20,<br>2d ed. | 378  | 25     | 4, 5                   |
|                  |             |                      | "                             | St. G. N. Y. | 2             | .... | 51     | 17, 18                 |
|                  |             |                      | H. & C.                       | Pal. N. Y.   | 8, pt. 2      | .... | 21     | 17, 18                 |
|                  |             |                      | radiatus .....                | " "          | 2             | .... | 22     | 2c                     |
|                  |             |                      | raricosta .....               | " "          | 8, pt. 2      | .... | 35     | 5, 6                   |
|                  |             |                      | rugicosta .....               | C. N. & G.   | 5             | 145  | ....   | ....                   |
|                  |             |                      | Saffordi .....                | Pal. N. Y.   | 3             | 203  | 28     | 2a-f                   |
|                  |             |                      | subsulcatus .....             | C. N. & G.   | 5             | 145  | ....   | ....                   |
|                  |             |                      | sulcatus (His.)....Hall.      | Geol. N. Y.  | 4th D.        | 106  | ct. 36 | 4, 4a                  |
| Cl.              | 1631        | Type.                | "                             | Pal. N. Y.   | 2             | 261  | 54     | 2b, f                  |
| Niag.            | 2192        | "                    | "                             | "            | 2             | 261  | 54     | 2a,c-d,g-k             |
| Cl.              | 1632        | "                    | "                             | "            | 2             | 261  | 54     | 2e, d. v.              |
| Niag.            | 1772        | Fig'd.               | "                             | St. G. N. Y. | 2             | .... | 60     | 2, enl.                |
| "                | "           | "                    | "                             | H. & C.      | 13            | .... | 24     | 4, "                   |
| "                | 1772        | "                    | "                             | "            | 8, pt. 2      | 16   | 35     | 2, "                   |
| "                | "           | "                    | " (His.)....Hall.             | St. G. N. Y. | 2             | ...  | 60     | 1, 3, 4                |
| "                | "           | "                    | H. & C.                       | "            | 13            | .... | 24     | 5, d. v.               |
| "                | "           | "                    | "                             | Pal. N. Y.   | 8, pt. 2      | 16   | 35     | 1, 3, 4                |
| L. H.            | 2443        | Type.                | tenuistriatus .....           | "            | 3             | 204  | 28     | 3a-d                   |
| "                | 2442        | "                    | "                             | St. G. N. Y. | 2             | .... | 61     | 8, d. v.               |
| "                | 1           | "                    | H. & C.                       | Pal. N. Y.   | 8, pt. 2      | .... | 36     | 8, "                   |
| "                | "           | "                    | Vanuxemi .....                | "            | 3             | 198  | 8      | 18, v. v.              |
| "                | "           | "                    | "                             | "            | 3             | 198  | 8      | 19, "                  |
| "                | "           | "                    | "                             | "            | 3             | 198  | 8      | 21-23a                 |
| "                | "           | "                    | ventricosus .....             | ....         | ....          | .... | ....   | ....                   |
| "                | "           | "                    | sp .....                      | St. G. N. Y. | 2             | .... | 61     | 9, 10                  |
| "                | "           | "                    | sp .....                      | Pal. N. Y.   | 2             | .... | 74     | 7, 8d                  |
| L. H.            | 2483        | Type.                | <b>Stenoschisma Conrad.</b>   |              |               |      |        |                        |
|                  |             |                      | altiplicatum .....            | N. Y. S. M.  | 10            | 72   | ....   | ....                   |
|                  |             |                      | "                             | Pal. N. Y.   | 3             | 231  | 33     | 2a, c, f-k             |
|                  |             |                      | formosum.....Hall.            | N. Y. S. M.  | 10            | 76   | ....   | ....                   |
|                  |             |                      | "                             | Pal. N. Y.   | 3             | 236  | 35     | { 3, 4c, d,<br>6a, c-e |
|                  |             |                      | "                             | "            | 3             | 236  | 35     | { 4a, b,<br>6f-n, r    |
|                  |             |                      | "                             | "            | 3             | 236  | 35     | 4e, f, 5, 6b           |
|                  |             |                      | "                             | N. Y. S. M.  | 10            | 73   | ....   | ....                   |
|                  |             |                      | "                             | Pal. N. Y.   | 3             | 232  | 33     | 3a-e                   |
|                  |             |                      | <b>Streptorhynchus King.</b>  |              |               |      |        |                        |
| Cl.              | 1518        | Type.                | deformis .....                | ....         | ....          | .... | ....   | ....                   |
|                  |             |                      | subplanum .....               | ....         | ....          | .... | ....   | ....                   |
|                  |             |                      | tenue .....                   | ....         | ....          | .... | ....   | ....                   |
|                  |             |                      | Woolworthanum .....           | ....         | ....          | .... | ....   | ....                   |
|                  |             |                      | <b>Stropheodonta Hall.</b>    |              |               |      |        |                        |
|                  |             |                      | Becki .....                   | ....         | ....          | .... | ....   | ....                   |
|                  |             |                      | cavumbona .....               | ....         | ....          | .... | ....   | ....                   |
|                  |             |                      | corrugata.....                | ....         | ....          | .... | ....   | ....                   |
|                  |             |                      | geniculata.....               | ....         | ....          | .... | ....   | ....                   |
|                  |             |                      | Headleyana .....              | ....         | ....          | .... | ....   | ....                   |
| L. H.            | 2430        | "                    | Leavenworthana .....          | ....         | ....          | .... | ....   | ....                   |
| Cl.              | 1518        | Type.                | orthididea .....              | Pal. N. Y.   | 2             | 62   | 21     | 7                      |
| L. H.            | 1           | "                    | planulata .....               | "            | 3             | 184  | 16     | 9, 10, 12              |



| LOCALITY.           | REMARKS.                                                                                                                      |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------|
| .....               | As <i>Spirifer plicatella</i> (Linn.), var. <i>radiata</i> Sow.                                                               |
| Racine, Wis.        | Large internal cast, not quite entire.                                                                                        |
| .....               | See <i>Cyrtia meta</i> .                                                                                                      |
| .....               | " <i>Spirifer perlamellosus</i> .                                                                                             |
| Arisaig, N. S.      | A somewhat broken ventral valve, imbedded.                                                                                    |
| Perry Co., Tenn.    | A very perfect individual from the "Meniscus beds."                                                                           |
| Arisaig, N. S.      | Part of a ventral valve, imbedded.                                                                                            |
| .....               | As type of <i>Delthyris decemplicata</i> Hall.                                                                                |
| Rochester, N. Y.    | A small individual.                                                                                                           |
| " "                 | Four individuals showing stages of growth.                                                                                    |
| Lockport, N. Y.     | An individual of medium size showing deltidial plates.                                                                        |
| " "                 | Two individuals.                                                                                                              |
| Decatur Co., Tenn.  | A siliceous cast of an entire individual.                                                                                     |
| Schoharie, N. Y.    | A very small ventral valve in block with <i>Stropheodonta</i> ( <i>Brachyprion</i> ) <i>varistriata</i> , fig. 2, same plate. |
| " "                 | Small individual in block with <i>Stropheodonta</i> ( <i>Brachyprion</i> ) <i>varistriata</i> , figs. 4, 8, 10, same plate.   |
| " "                 | Two dorsal and a ventral valve, rather large.                                                                                 |
| .....               | See <i>Nucleospira ventricosa</i> .                                                                                           |
| .....               | " <i>Spirifer crispatus</i> .                                                                                                 |
| .....               | " " <i>crispus</i> .                                                                                                          |
| .....               | Genus revised by Hall, w. <i>Spirifer formosum</i> as type, in Pal. N. Y., vol. 4, at p. 334.                                 |
| .....               | As <i>Rhynchonella altiplicata</i> .                                                                                          |
| Schoharie, N. Y.    | " " " Two individuals, small and large.                                                                                       |
| .....               | " <i>Rhynchonella formosa</i> .                                                                                               |
| Near Hudson, N. Y.  | " " " Four individuals of small to medium size.                                                                               |
| Carlisle, N. Y.     | " " " Five individuals.                                                                                                       |
| Schoharie, N. Y.    | " " " Two "                                                                                                                   |
| .....               | " type of <i>Rhynchonella acutiplicata</i> Hall.                                                                              |
| Schoharie, N. Y.    | " " " " " An entire adult.                                                                                                    |
| .....               | See <i>Orthothetes deformis</i> .                                                                                             |
| .....               | " " <i>subplanus</i> and <i>Strophonella semifasciata</i> .                                                                   |
| .....               | " " <i>tenuis</i> .                                                                                                           |
| .....               | " " <i>Woolworthanus</i> .                                                                                                    |
| .....               | " <i>Leptostrophia Becki</i> .                                                                                                |
| .....               | " <i>Strophonella cavumbona</i> .                                                                                             |
| .....               | " <i>Amphistrophia corrugata</i> .                                                                                            |
| .....               | " <i>Strophonella geniculata</i> .                                                                                            |
| .....               | " " <i>Headleyana</i> .                                                                                                       |
| .....               | " " <i>Leavenworthana</i> .                                                                                                   |
| Near Clinton, N. Y. | Probably = <i>Stropheodonta corrugata</i> . Imprint of ventral valve.                                                         |
| Schoharie, N. Y.    | Three ventral valves imbedded separately.                                                                                     |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.              | REFERENCE.   |          |       |       |             |
|---------------|------------------|-------------------|-----------------------------------------|--------------|----------|-------|-------|-------------|
|               |                  |                   |                                         | Work.        | Vol.     | P.    | Pl.   | Figs.       |
|               |                  |                   | <b>Stropheodonta Hall—Cont.</b>         |              |          |       |       |             |
|               |                  |                   | <i>prisca</i> .....                     | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <i>profunda</i> .....                   | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <i>punctulifera</i> .....               | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <i>semifasciata</i> .....               | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <i>striata</i> .....                    | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <i>varistriata</i> .....                | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | “ var. <i>arata</i> ...                 | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <b>Strophomena (Raf.) de Bl.</b>        |              |          |       |       |             |
|               |                  |                   | <i>Becki</i> .....                      | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <i>Conradi</i> .....                    | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <i>cornuta</i> .....                    | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <i>corrugata</i> .....                  | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <i>depressa</i> .....                   | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <i>elegantula</i> .....                 | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <i>Leavenworthana</i> .....             | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <i>radiata</i> .....                    | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <i>rhomboidalis</i> .....               | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <i>rugosa</i> .....                     | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <i>semifasciata</i> .....               | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <i>Woolworthana</i> .....               | .....        | .....    | ..... | ..... | .....       |
|               |                  |                   | <b>Strophonella Hall.</b>               |              |          |       |       |             |
| L. H.         | <u>2434</u><br>1 | Type.             | <i>cavumbona</i> .....Hall.             | Pal. N. Y.   | 3        | 187   | 21    | 1a, b       |
| “             | <u>2434</u><br>3 | “                 | “ .....                                 | “ “          | 3        | 187   | 21    | 1f-h        |
| “             | “                | “                 | “ .....                                 | “ “          | 3        | 187   | 21    | 3, v.v.     |
| “             | 2428             | “                 | <i>Conradi</i> .....Hall.               | “ “          | 3        | 194   | 16    | 13a-15      |
| “             | 2436             | “                 | <i>geniculata</i> .....Hall.            | “ “          | 3        | 483   | 23    | 6a-c        |
| “             | <u>2433</u><br>1 | “                 | <i>Headleyana</i> .....Hall.            | “ “          | 3        | 185   | 20    | 2a-c, 3d, e |
| “             | “                | “                 | “ .....                                 | “ “          | 3        | 185   | 20    | 2d          |
| “             | <u>2433</u><br>4 | “                 | “ .....                                 | “ “          | 3        | 185   | 20    | 2e-f        |
| “             | <u>2433</u><br>1 | “                 | “ .....                                 | “ “          | 3        | 185   | 20    | 3a-c        |
| “             | <u>2435</u><br>2 | “                 | <i>Leavenworthana</i> ...Hall.          | N. Y. S. M.  | 10       | 53    | ..... | .....       |
| “             | “                | “                 | “ .....                                 | Pal. N. Y.   | 3        | 189   | 21    | 5a, b       |
| “             | <u>2435</u><br>1 | “                 | “ .....                                 | “ “          | 3        | 189   | 21    | 7a, b       |
| “             | <u>2435</u><br>2 | “                 | “ .....                                 | “ “          | 3        | 189   | 23    | 1a-c        |
| “             | “                | “                 | “ .....                                 | “ “          | 3        | 189   | 23    | 2a, b, e    |
| “             | “                | “                 | “ .....                                 | St. G. N. Y. | 2        | ....  | 43    | 6, 7        |
| “             | “                | “                 | H. & C. “ .....                         | “ “          | 11       | ....  | 15    | 9, 10       |
| “             | “                | “                 | “ .....                                 | Pal. N. Y.   | 8, pt. I | 292   | 12    | 6, 7        |
| “             | “                | “                 | Hall. “ .....                           | St. G. N. Y. | 2        | ....  | 43    | 8, int.     |
| “             | “                | “                 | H. & C. “ .....                         | “ “          | 11       | ....  | 15    | 7, “        |
| “             | “                | “                 | “ .....                                 | Pal. N. Y.   | 8, pt. I | 292   | 12    | 8, “        |
| “             | <u>2435</u><br>1 | “                 | Hall. “ .....                           | St. G. N. Y. | 2        | ....  | 43    | 9, int.     |
| “             | “                | “                 | H. & C. “ .....                         | “ “          | 11       | ....  | 15    | 8, “        |
| “             | “                | “                 | “ .....                                 | Pal. N. Y.   | 8, pt. I | 292   | 12    | 9, “        |
| Cl.           | 1523             | Type.             | ? <i>patenta</i> .....Hall.             | Pal. N. Y.   | 2        | 60    | 21    | 3b, c       |
| “             | 1524             | “                 | <i>prisca</i> .....                     | “ “          | 2        | 63    | 21    | 9a, b       |
| L. H.         | <u>2432</u><br>1 | Fig'd.            | <i>punctulifera</i> (Con.). “           | “ “          | 3        | 188   | 21    | 4a, b       |
| “             | <u>2432</u><br>5 | “                 | “ .....                                 | “ “          | 3        | 188   | 23    | 4c          |
| “             | <u>2432</u><br>1 | “                 | “ .....                                 | St. G. N. Y. | 2        | ....  | 43    | 10, 12      |
| “             | “                | “                 | H. & C. “ .....                         | Pal. N. Y.   | 8, pt. I | 292   | 12    | 10, 12      |
| “             | 2426             | “                 | <i>radiata</i> ( <i>Vanux.</i> ) ....H. | N. Y. S. M.  | 10       | 50    | ....  | .....       |
| “             | “                | “                 | “ .....                                 | Pal. N. Y.   | 3        | 193   | 18    | 3b-e        |



| LOCALITY.               | REMARKS.                                                                    |
|-------------------------|-----------------------------------------------------------------------------|
| .....                   | See <i>Strophonella prisca</i> .                                            |
| .....                   | " <i>Brachyprion profundum</i> .                                            |
| .....                   | " <i>Strophonella punctulifera</i> .                                        |
| .....                   | " " <i>semifasciata</i> .                                                   |
| .....                   | " <i>Amphistrophia striata</i> .                                            |
| .....                   | " <i>Brachyprion varistriatum</i> .                                         |
| .....                   | " " " var. <i>aratum</i> .                                                  |
| .....                   | " <i>Leptostrophia Becki</i> .                                              |
| .....                   | " <i>Strophonella Conradi</i> .                                             |
| .....                   | " <i>Chonetes cornutus</i> .                                                |
| .....                   | " <i>Amphistrophia corrugata</i> .                                          |
| .....                   | " <i>Leptæna rhomboidalis</i> .                                             |
| .....                   | " <i>Plectambonites sericeus</i> .                                          |
| .....                   | " <i>Strophonella Leavenworthana</i> .                                      |
| .....                   | " " <i>radiata</i> .                                                        |
| .....                   | " <i>Leptæna rhomboidalis</i> .                                             |
| .....                   | " " "                                                                       |
| .....                   | " <i>Strophonella semifasciata</i> .                                        |
| .....                   | " <i>Orthothetes Woolworthanus</i> .                                        |
| Schoharie, N. Y.        | As <i>Strophodonta cavumbona</i> . Cast of small dorsal valve ; some shell. |
| Near Hudson, N. Y.      | " " " Internal cast dorsal valve.                                           |
| " "                     | " " " Exfoliated ventral valve, imbedded.                                   |
| Near Clarksville, N. Y. | " <i>Strophomena Conradi</i> . Two large ventral valves, imbedded.          |
| Nr. Cumberland, Md.     | " <i>Strophodonta geniculata</i> . Small individual, nearly entire.         |
| Schoharie, N. Y.        | " " <i>Headleyana</i> . Three ventral valves, imbedded.                     |
| " "                     | " " " Internal cast ventral valve, retaining some shell.                    |
| Near Hudson, N. Y.      | As <i>Strophodonta Headleyana</i> . Internal cast large ventral valve.      |
| Schoharie, N. Y.        | " " " Large ventral valve, imbedded.                                        |
| .....                   | " <i>Strophomena (Strophodonta) Leavenworthana</i> .                        |
| Helderberg Mts., N. Y.  | " <i>Strophodonta Leavenworthana</i> . Somewhat crushed indiv., imb.        |
| Clarksville, N. Y.      | " " " Ventral valve, somewhat crushed, imbedded.                            |
| Helderberg Mts., N. Y.  | As <i>Strophodonta Leavenworthana</i> . Small, entire individual.           |
| .....                   | " " "                                                                       |
| Helderberg Mts., N. Y.  | Adult individual, very nearly entire, imbedded.                             |
| " "                     | Dorsal valve.                                                               |
| Clarksville, N. Y.      | Large ventral valve, fragmentary, imbedded.                                 |
| Reynale's Basin, N. Y.  | As <i>Leptæna patenta</i> . Large ventral valve, imbedded.                  |
| Kirkland, N. Y.         | " <i>Strophodonta prisca</i> . Imprint ventral valve. = <i>S. striata</i> ? |
| Schoharie, N. Y.        | " <i>Strophodonta punctulifera</i> . An almost entire indiv.; not a cast.   |
| Port Colburn, Ont.      | " " " Internal cast large ventral valve, with some shell.                   |
| Schoharie, N. Y.        | A large individual, imbedded.                                               |
| .....                   | As <i>Strophomena radiata</i> .                                             |
| Near Hudson, N. Y.      | " " " Internal casts of four ventral valves.                                |

## Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.     | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.             | REFERENCE.         |                |       |        |                          |
|---------------|--------------|--------------------|----------------------------------------|--------------------|----------------|-------|--------|--------------------------|
|               |              |                    |                                        | Work.              | Vol.           | P.    | Pl.    | Figs.                    |
| Niag.         | 1932         | Gen. and Sp. Type. | <b>Strophonella</b> Hall— <i>Cont.</i> |                    |                |       |        |                          |
|               |              |                    | semifasciata.....Hall.                 | T. A. I.           | 4              | 210   | ....   | .....                    |
|               |              |                    | "                                      | N. Y. S. M.        | 28             | ...   | 21     | 33                       |
|               |              |                    | "                                      | " "                | 28,<br>1st ed. | ....  | 22     | 3, card.                 |
|               |              |                    | "                                      | " "                | 28,<br>2d ed.  | 154   | 22     | 3, "                     |
|               |              |                    | "                                      | St. G. N. Y.       | 2              | ....  | 43     | 5, "                     |
|               |              |                    | H. & C.                                | " "                | 11             | ....  | 15     | 6, "                     |
|               |              |                    | "                                      | Pal. N. Y.         | 8, pt. 1       | 291   | 12     | 5, "                     |
|               |              |                    | " .....Hall.                           | N. Y. S. M.        | 28,<br>1st ed. | ....  | 22     | 1, d.v.                  |
|               |              |                    | "                                      | " "                | 28,<br>2d ed.  | 154   | 22     | 1, "                     |
|               |              |                    | "                                      | " "                | 28,<br>1st ed. | ....  | 22     | 2, "                     |
|               |              |                    | "                                      | " "                | 28,<br>2d ed.  | 154   | 22     | 2, "                     |
|               |              |                    | "                                      | " "                | 28,<br>1st ed. | ....  | 23     | 7, ext.                  |
|               |              |                    | "                                      | " "                | 28,<br>2d ed.  | 154   | 23     | 7, "                     |
|               |              |                    | "                                      | St. G. N. Y.       | 2              | ....  | 43     | 4, "                     |
| Cl.<br>L. H.  | 1629<br>2461 | Type.              | H. & C.                                | " "                | 11             | ....  | 15     | 5, "                     |
|               |              |                    | "                                      | Pal. N. Y.         | 8, pt. 1       | 291   | 12     | 4, "                     |
|               |              |                    | " .....Hall.                           | N. Y. S. M.        | 28,<br>1st ed. | ....  | 23     | 8, int.                  |
|               |              |                    | "                                      | " "                | 28,<br>2d ed.  | 154   | 23     | 8, "                     |
|               |              |                    | <i>striata</i> .....                   | .....              | .....          | ..... | .....  | .....                    |
|               |              |                    | <b>Trematospira</b> Hall.              |                    |                |       |        |                          |
|               |              |                    | acadiæ.....Hall.                       | C. N. & G.         | 5              | 146   | P. 144 | 4, ext.                  |
|               |              |                    | costata.....                           | Pal. N. Y.         | 3              | 210   | 28A    | 4a-e                     |
|               |              |                    | <i>formosa</i> .....                   | .....              | .....          | ..... | .....  | .....                    |
|               |              |                    | <i>globosa</i> .....                   | .....              | .....          | ..... | .....  | .....                    |
|               |              |                    | L. H. 2459<br>1                        | Gen. and Sp. Type. |                |       |        |                          |
|               |              |                    | multistriata.....Hall.                 | N. Y. S. M.        | 10             | 59    | ....   | .....                    |
|               |              |                    | "                                      | " "                | 12             | 27    | ...    | 3, v.v.                  |
|               |              |                    | "                                      | Pal. N. Y.         | 3              | 209   | 24     | 3a, b, e-m,<br>s, t      |
|               |              |                    | H. & C.                                | St. G. N. Y.       | 13             | ....  | 38     | 5f, v.v.                 |
|               |              |                    | "                                      | Pal. N. Y.         | 8, pt. 2       | 126   | 49     | 3, 4<br>9, 10            |
| L. H.         | 2460         | Type.              | perforata.....Hall.                    | " "                | 3              | 208   | 28A    | 3a-k                     |
|               |              |                    | H. & C.                                | " "                | 8, pt. 2       | 126   | 49     | 5, 6                     |
| Niag.         | 2194         | Type.              | <i>rectirostra</i> .....               | .....              | .....          | ..... | .....  | .....                    |
|               |              |                    | simplex .....Hall.                     | Pal. N. Y.         | 3              | 211   | 28A    | 2a-f                     |
| L. H.         | 2474         | "                  | <b>Uncinulus</b> Bayle.                |                    |                |       |        |                          |
|               |              |                    | abruptus.....Hall.                     | N. Y. S. M.        | 10             | 68    | ....   | .....                    |
|               |              |                    | "                                      | Pal. N. Y.         | 3              | 228   | 31     | 3a-d                     |
|               |              |                    | H. & C.                                | St. G. N. Y.       | 13             | ....  | 44     | 8, 9                     |
|               |              |                    | "                                      | Pal. N. Y.         | 8, pt. 2       | 199   | 58     | 20, 21                   |
|               |              |                    | Campbellanus.....Hall.                 | N. Y. S. M.        | 10             | 79    | ....   | .....                    |
|               |              |                    | "                                      | Pal. N. Y.         | 3              | 239   | 43     | 2a-k                     |
|               |              |                    | eminens.....Hall.                      | N. Y. S. M.        | 10             | 78    | ....   | .....                    |
|               |              |                    | "                                      | Pal. N. Y.         | 3              | 237   | 37     | 3a-4a                    |
|               |              |                    | mutabilis.....Hall.                    | N. Y. S. M.        | 10             | 66    | ....   | .....                    |
|               |              |                    | "                                      | Pal. N. Y.         | 3              | 225   | 29     | 4a-m, o, p               |
|               |              |                    | "                                      | " "                | 3              | 225   | 30     | 1a-c, 2b,<br>2e, f, i, m |
|               |              |                    | "                                      | " "                | 3              | 225   | 30     | 2e, f, i, m              |
|               |              |                    | H. & C.                                | " "                | 8, pt. 2       | 199   | 58     | 22, 23                   |



| LOCALITY.              | REMARKS.                                                                                                                                                                                               |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                  | As <i>Strophomena</i> ( <i>Strophodonta</i> ?) <i>semifasciata</i> .                                                                                                                                   |
| .....                  | " <i>Streptorhynchus subplanum</i> by error.                                                                                                                                                           |
| .....                  | " <i>Strophomena</i> ( <i>Strophodonta</i> ?) <i>semifasciata</i> .                                                                                                                                    |
| .....                  | Made type of genus <i>Strophonella</i> .                                                                                                                                                               |
| Waldron, Ind.          | Large imperfect individual, showing centre of hinge very perfectly.                                                                                                                                    |
| .....                  | As <i>Strophomena</i> ( <i>Strophodonta</i> ?) <i>semifasciata</i> .                                                                                                                                   |
| Waldron, Ind.          | Imbedded dorsal valve bearing <i>Chonetes undulatus</i> , fig. 15, pl. 21.                                                                                                                             |
| .....                  | As <i>Strophomena</i> ( <i>Strophodonta</i> ?) <i>semifasciata</i> .                                                                                                                                   |
| Waldron, Ind.          | Large, nearly entire individual, imbedded.                                                                                                                                                             |
| .....                  | As <i>Strophomena</i> ( <i>Strophodonta</i> ?) <i>semifasciata</i> .                                                                                                                                   |
| Waldron, Ind.          | Very large ventral valve.                                                                                                                                                                              |
| .....                  | As <i>Strophomena</i> ( <i>Strophodonta</i> ?) <i>semifasciata</i> .                                                                                                                                   |
| Waldron, Ind.          | An imperfect dorsal valve, imbedded.                                                                                                                                                                   |
| .....                  | See <i>Amphistrophia striata</i> .                                                                                                                                                                     |
| Arisaig, N. S.         | Small ventral valve in block, with the types of <i>Chonetes nova-scoticus</i> .                                                                                                                        |
| Clarksville, N. Y.     | A rather small individual, not quite entire.                                                                                                                                                           |
| .....                  | See <i>Rhynchospira formosa</i> .                                                                                                                                                                      |
| .....                  | " " <i>globosa</i> .                                                                                                                                                                                   |
| .....                  | As <i>Spirifer multistriatus</i> .                                                                                                                                                                     |
| .....                  | Genus defined.                                                                                                                                                                                         |
| Clarksville, N. Y.     | Four entire individuals and one ground down to show spires. In volume 8 this species is made the type of the genus, though <i>T. perforata</i> is the first one described under the genus in volume 3. |
| Hudson, N. Y.          | Four individuals, one of which is broken so as to show spires.                                                                                                                                         |
| .....                  | See <i>Rhynchospira rectirostra</i> .                                                                                                                                                                  |
| Perry Co., Tenn.       | Two individuals from the "Meniscus beds" of the Glades.                                                                                                                                                |
| .....                  | As <i>Rhynchonella abrupta</i> .                                                                                                                                                                       |
| .....                  | " " "                                                                                                                                                                                                  |
| Schoharie Co., N. Y.   | The two adults which were used for these figures.                                                                                                                                                      |
| .....                  | As <i>Rhynchonella Campbellana</i> .                                                                                                                                                                   |
| Helderberg Mts., N. Y. | " " " Four individuals and one internal cast.                                                                                                                                                          |
| .....                  | " " <i>eminens</i> .                                                                                                                                                                                   |
| Helderberg Mts., N. Y. | " " " Two individuals, one of which is imb.                                                                                                                                                            |
| .....                  | " " <i>mutabilis</i> .                                                                                                                                                                                 |
| Helderberg Mts., N. Y. | " " " Six individuals, more or less exfoliated.                                                                                                                                                        |
| .....                  | " " "                                                                                                                                                                                                  |
| Helderberg Mts., N. Y. | Six more or less exfoliated individuals.                                                                                                                                                               |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.           | REFERENCE.   |                           |      |      |                              |
|---------------|------------------|--------------------|--------------------------------------|--------------|---------------------------|------|------|------------------------------|
|               |                  |                    |                                      | Work.        | Vol.                      | P.   | Pl.  | Figs.                        |
| L. H.         | $\frac{2477}{2}$ | Type.              | <b>Uncinulus</b> Bayle— <i>Cont.</i> | Pal. N. Y.   | 3                         | 225  | 30   | 2r, s                        |
| "             | $\frac{2476}{1}$ | "                  | mutabilis.....Hall.                  | N. Y. S. M.  | 10                        | 80   |      |                              |
|               |                  |                    | nobilis....."                        | Pal. N. Y.   | 3                         | 240  | 43   | 3a-l                         |
| "             | $\frac{2480}{1}$ | "                  | nucleolatus....."                    | N. Y. S. M.  | 10                        | 68   | .... | .....                        |
|               |                  |                    | "                                    | Pal. N. Y.   | 3                         | 227  | 31   | 1a-f<br>2a-k, m-y            |
| "             | $\frac{2478}{1}$ | "                  | pyramidatus.....Hall.                | N. Y. S. M.  | 10                        | 70   | .... | .....                        |
|               |                  |                    | "                                    | Pal. N. Y.   | 3                         | 229  | 32   | 1a-z                         |
|               |                  |                    | H. & C.                              | "            | 8, pt. 2                  | .... | 58   | 27, 28                       |
| "             | "                | "                  | ".....Hall.                          | "            | 3                         | 229  | 32   | 2a-c                         |
| Niag.         | $\frac{1939}{1}$ | Fig'd.             | Stricklandi (Sow.)....H.             | N. Y. S. M.  | <sup>28,</sup><br>1st ed. | .... | 26   | 34-40                        |
|               |                  |                    | "                                    | "            | <sup>28,</sup><br>2d ed.  | 165  | 26   | 34-40                        |
|               |                  |                    | H. & C.                              | Pal. N. Y.   | 8, pt. 2                  | 199  | 58   | 39, 40                       |
| L. H.         | $\frac{2487}{1}$ | Type.              | transversus.....Hall.                | N. Y. S. M.  | 10                        | 74   | .... | .....                        |
|               |                  |                    | "                                    | Pal. N. Y.   | 3                         | 234  | 34   | 9-11, 13 (?)<br>14a, 14c-16c |
| "             | "                | Fig'd.             | "....."                              | "            | 3                         | 234  | 34   | 17-19                        |
| "             | $\frac{2484}{4}$ | Type.              | vellicatus.....Hall.                 | N. Y. S. M.  | 10                        | 71   |      |                              |
|               |                  |                    | "                                    | Pal. N. Y.   | 3                         | 230  | 33   | 1a-o                         |
| "             | $\frac{2484}{1}$ | "                  | "....."                              | "            | 3                         | 230  | 33   | 1p, v.v.                     |
|               |                  |                    | <b>Waldheimia</b> King.              |              |                           |      |      |                              |
|               |                  |                    | formosa.....                         |              |                           |      |      |                              |
|               |                  |                    | globosa.....                         |              |                           |      |      |                              |
|               |                  |                    | rectirostra.....                     |              |                           |      |      |                              |
|               |                  |                    | <b>Whitfieldella</b> Hall            |              |                           |      |      |                              |
| Niag.         | 1782             | Type.              | crassirostra.....Hall.               | Pal. N. Y.   | 2                         | 269  | 55   | 4a-c                         |
| Cl.           | 1530             | "                  | cylindrica....."                     | "            | 2                         | 76   | 24   | 2a-h                         |
| "             | "                | "                  | "....."                              | "            | 2                         | 76   | 24   | 6a, b                        |
| "             | $\frac{1531}{1}$ | "                  | intermedia....."                     | "            | 2                         | 77   | 24   | 3e                           |
| "             | $\frac{1531}{3}$ | "                  | "....."                              | "            | 2                         | 77   | 24   | 4a-d                         |
| "             | 1534             | Fig'd.             | "....."                              | "            | 2                         | 78   | 24   | 5a, b                        |
| "             | 1532             | Type.              | naviformis....."                     | "            | 2                         | 76   | 24   | 1a-f                         |
| Niag.         | $\frac{1529}{4}$ | Gen. and Sp. Type. | nitida....."                         | "            | 2                         | 268  | 55   | 1a-o                         |
| "             | $\frac{1529}{5}$ | "                  | "....."                              | N. Y. S. M.  | 28                        | 160  | 25   | 1-7                          |
|               |                  |                    | H. & C.                              | St. G. N. Y. | 13                        | .... | 32   | 2, 3                         |
| "             | "                | "                  | " (Hall.)                            | Pal. N. Y.   | 8, pt. 2                  | 59   | 40   | 8, 9, 11                     |
|               |                  |                    | "                                    | St. G. N. Y. | 13                        | .... | 32   | 1, 4                         |
|               |                  |                    | "                                    | Pal. N. Y.   | 8, pt. 2                  | 59   | 40   | 4, 5                         |
| "             | $\frac{1780}{1}$ | Type.              | " var. oblata....Hall.               | "            | 2                         | 269  | 55   | 2a-c                         |
| "             | "                | Fig'd.             | " " " " " "                          | "            | 2                         | 269  | 55   | 3c-e                         |
| Med.          | 1429             | Type.              | oblata....."                         | "            | 2                         | 9    | 4    | 4a-c                         |
| "             | "                | "                  | "....."                              | "            | 2                         | 9    | 4    | 5, int.                      |
|               |                  |                    | <b>Wilsonia</b> (Quenst.) Kayser.    |              |                           |      |      |                              |
| Cl.           | 1633             | Type.              | Saffordi.....Hall.                   | C. N. & G.   | 5                         | 146  | .... | .....                        |
| Niag.         | 2200             | "                  | "....."                              | "            | 5                         | 146  | .... | .....                        |
| L. II.        | $\frac{2479}{1}$ | "                  | ventricosa....."                     | N. Y. S. M.  | 10                        | 78   | .... | .....                        |
|               |                  |                    | "                                    | Pal. N. Y.   | 3                         | 238  | 43   | 1a-m                         |
|               |                  |                    | H. & C.                              | "            | 8, pt. 2                  | 198  | 58   | 13, prof.                    |



| LOCALITY.                        | REMARKS.                                                                                                  |
|----------------------------------|-----------------------------------------------------------------------------------------------------------|
| Helderberg Mts., N. Y.           | As <i>Rhynchonella mutabilis</i> . Internal cast of an adult.                                             |
| Albany and Schoharie Cos., N. Y. | “ “ <i>nobilis</i> . Five individuals. One is exfoliated, showing internal features of the ventral valve. |
| .....                            | As <i>Rhynchonella nucleolata</i> .                                                                       |
| .....                            | “ “ “                                                                                                     |
| Helderberg Mts., N. Y.           | “ “ “ Thirteen individuals, one of which is weathered so as to show some internal features.               |
| .....                            | As <i>Rhynchonella pyramidata</i> .                                                                       |
| .....                            | “ “ “                                                                                                     |
| Helderberg Mts., N. Y.           | Thirteen individuals, more or less exfoliated. The figures in volume 8 were made from two individuals.    |
| “ “ “                            | As <i>Rhynchonella pyramidata</i> . An entire int. cast and a vent. valve.                                |
| .....                            | “ “ <i>tennesseensis</i> , Roem.                                                                          |
| .....                            | “ “ <i>Stricklandi</i>                                                                                    |
| Waldron, Ind.                    | “ <i>Uncinulus</i> ( <i>Uncinulina</i> ) on plate. Two very perfect adults.                               |
| .....                            | “ <i>Rhynchonella transversa</i> .                                                                        |
| Cumberland, Md.                  | “ “ “ Six individuals.                                                                                    |
| “ “                              | “ “ <i>transversa</i> ? var. Three individuals.                                                           |
| Schoharie, N. Y.                 | “ “ <i>vellicata</i> . Five entire individuals.                                                           |
| Helderberg Mts., N. Y.           | “ “ “ Internal cast of an individual.                                                                     |
| .....                            | See <i>Rhynchospira formosa</i> .                                                                         |
| .....                            | “ “ <i>globosa</i> .                                                                                      |
| .....                            | “ “ <i>rectirostra</i> .                                                                                  |
| Lockport, N. Y.                  | As <i>Atrypa crassirostra</i> . A large individual.                                                       |
| “ “                              | “ “ <i>cylindrica</i> . Two individuals.                                                                  |
| “ “                              | “ “ “ ? Internal cast of adult.                                                                           |
| “ “                              | “ “ <i>intermedia</i> . Individual, considerably exfoliated.                                              |
| Sodus Point, N. Y.               | “ “ “ A young individual.                                                                                 |
| Clinton, N. Y.                   | “ “ sp. Internal cast of ventral valve.                                                                   |
| Sodus Point, N. Y.               | “ “ <i>naviformis</i> . A nearly perfect individual.                                                      |
| Lockport, N. Y.                  | “ “ <i>nitida</i> . Eight individuals. The one credited to figs. 1c, d seems not to be a N. Y. specimen.  |
| .....                            | As <i>Meristina nitida</i> .                                                                              |
| .....                            | Genus defined at p. 766.                                                                                  |
| Waldron, Ind.                    | Five individuals.                                                                                         |
| “ “                              | Two opposite valves, entire.                                                                              |
| Lockport, N. Y.                  | As <i>Atrypa nitida</i> , var. <i>oblata</i> . Two indiv., one of wh. is imbedded.                        |
| “ “                              | “ <i>Atrypa</i> sp. undet. Internal cast of individual, imbedded.                                         |
| “ “                              | “ “ <i>oblata</i> . A considerably exfoliated individual.                                                 |
| “ “                              | “ “ “ Internal cast ventral valve, imbedded.                                                              |
| Arisaig, N. S.                   | “ <i>Rynchonella Saffordi</i> . Several shells, imbedded.                                                 |
| Perry Co., Tenn.                 | “ “ “ Several individuals from the Meniscus Beds in the Glades.                                           |
| .....                            | As <i>Rhynchonella ventricosa</i> .                                                                       |
| .....                            | “ “ “                                                                                                     |
| Schcharie, N. Y.                 | Five individuals, more or less exfoliated.                                                                |

Subkingdom MOLLUSCA.

| Geol.<br>Subdiv.          | Cat.<br>No. | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.        | REFERENCE.  |          |      |        |              |
|---------------------------|-------------|----------------------|-----------------------------------|-------------|----------|------|--------|--------------|
|                           |             |                      |                                   | Work.       | Vol.     | P.   | Pl.    | Figs.        |
| Med.<br>Cl.<br>Niag.<br>" | 1431        | Fig'd.               | <b>Actinopteria</b> Hall.         |             |          |      |        |              |
|                           | 1554        | "                    | emacerata ( <i>Con.</i> )...Hall. | Pal. N. Y.  | 2        | 11   | 4 bis. | 2d, e        |
|                           | 1554        | "                    | " " " "                           | " "         | 2        | 83   | 27     | 1a, ext.     |
|                           | 6           | "                    | " " " "                           | " "         | 2        | 282  | 59     | 1a, c, e     |
| L. H.                     | 2518        | Type.                | textilis .....Hall.               | " "         | 2        | 282  | 59     | 1b, d        |
|                           | 1           |                      |                                   |             | 3        | 288  | 53     | 3, 10        |
|                           | 1951        | Type.                | <b>Ambonychia</b> Hall.           |             |          |      |        |              |
|                           | 1951        | "                    | acutirostra .....Hall.            | N. Y. S. M. | 20       | 336  | 14     | 2, int. l.v. |
| Niag.                     | 2068        | "                    | " " " "                           | " "         | 28       | 171  | 7      | 12, " r.v.   |
|                           | 1           | "                    | aphæa .....Hall.                  | " "         | 20       | 336  | 14     | 3, int. l.v. |
|                           | 2072        | Gen. and             | <b>Amphicœlia</b> Hall.           |             |          |      |        |              |
|                           | 1           | Sp. Type.            | Leidyi.....Hall.                  | " "         | 20       | 339  | 14     | 13, 15       |
| "                         | 2072        | "                    | " " " "                           | " "         | 20       | 339  | 14     | 14, l. v.    |
|                           | 2           | "                    | " " " "                           | " "         | 28       | 171  | 27     | 1, 2         |
|                           | 1949        | "                    | " " " "                           | " "         | 28       | 171  | 27     | 1, 2         |
|                           | 1797        | Type.                | orbiculata .....Hall.             | Pal. N. Y.  | 2        | 284  | 59     | 4, r. v.     |
| Cl.                       | 1557        | Type.                | <b>Anatina</b> Lamarck.           |             |          |      |        |              |
|                           |             |                      | sinuata .....Hall.                |             |          |      |        |              |
|                           |             |                      | <b>Anodontopsis</b> McCoy.        |             |          |      |        |              |
|                           |             |                      | alata .....Hall.                  | Geol. N. Y. | 4th D.   | 72   | ct. 17 | 7, ext.      |
| "                         |             |                      | " " " "                           | Pal. N. Y.  | 2        | 87   | 27     | 4, "         |
|                           |             |                      | <b>Avicula</b> Klein.             |             |          |      |        |              |
|                           |             |                      | bellula .....Hall.                |             |          |      |        |              |
|                           |             |                      | communis .....Hall.               |             |          |      |        |              |
| "                         |             |                      | emacerata.....Hall.               |             |          |      |        |              |
|                           |             |                      | Honeymani.....Hall.               |             |          |      |        |              |
|                           |             |                      | mantacula.....Hall.               |             |          |      |        |              |
|                           |             |                      | orbiculata .....Hall.             |             |          |      |        |              |
| "                         |             |                      | rhomboidea.....Hall.              |             |          |      |        |              |
|                           |             |                      | securiformis.....Hall.            |             |          |      |        |              |
|                           |             |                      | spinulifera.....Hall.             |             |          |      |        |              |
|                           |             |                      | subplana .....Hall.               |             |          |      |        |              |
| "                         |             |                      | tenuilamellata.....Hall.          |             |          |      |        |              |
|                           |             |                      | textilis.....Hall.                |             |          |      |        |              |
|                           |             |                      | undata .....Hall.                 |             |          |      |        |              |
|                           |             |                      | <b>Aviculopecten</b> McCoy.       |             |          |      |        |              |
| L. H.                     | 2508        | Type.                | spinulifer .....Hall.             | Pal. N. Y.  | 3        | 282  | 51     | 3            |
|                           | 2508        | "                    | " " " "                           | " "         | 3        | 282  | 51     | 4            |
|                           | 2509        | "                    | tenuilamellatus....Hall.          | " "         | 3        | 281  | 51     | 1            |
|                           | 2           |                      |                                   |             |          |      |        |              |
| Cl.                       | 1643        | "                    | <b>Cleidophorus</b> Hall.         |             |          |      |        |              |
|                           | 1642        | "                    | concentricus.....Hall.            | C. N. & G.  | 5        | 149  | ....   | 7            |
|                           | 1639        | Type.                | elongatus .....Hall.              | " "         | 5        | 150  | ....   | 9            |
|                           |             |                      | erectus.....Hall.                 | " "         | 5        | 149  | ....   | 8            |
| "                         | 1640        | "                    | nuculiformis .....Hall.           | " "         | 5        | 150  | ....   | ....         |
|                           | 1638        | "                    | semiradiatus .....Hall.           | " "         | 5        | 150  | ....   | ....         |
|                           | 1641        | "                    | subovatus .....Hall.              | " "         | 5        | 151  | ....   | ....         |
|                           |             |                      | <b>Conocardium</b> Brown.         |             |          |      |        |              |
| L. H.                     | 2849        | "                    | inceptum.....Hall.                | Pal. N. Y.  | 5, pt. I | 415  | 68     | 32           |
|                           |             |                      | " " " "                           | " "         | 5, pt. I | .... | 68     | 32           |
|                           |             |                      | rugosum .....Hall.                |             |          |      |        |              |
|                           |             |                      | <b>Cuneamyia</b> Hall & Whitf.    |             |          |      |        |              |
| Niag.                     | 1835        | Type.                | alveata, sp. nov.....Hall.        |             |          |      |        |              |
|                           |             |                      | " " " "                           | Pal. N. Y.  | 2        | 285  | 59     | 8, card.     |
|                           |             |                      | " " " "                           | " "         | 2        | 86   | 27     | 10, 13       |
|                           | 1563        | "                    | curta.....Hall.                   |             |          |      |        |              |



Class LAMELLIBRANCHIATA.

| LOCALITY.               | REMARKS.                                                                  |
|-------------------------|---------------------------------------------------------------------------|
| Lockport, N. Y.         | As <i>Modiolopsis ? primigenia</i> Con. Exterior imprint left valve,      |
| Sodus, N. Y.            | " <i>Avicula emacerata</i> . Small left valve, somewhat broken, imbed.    |
| Lockport, N. Y.         | " " " Cast of small and imp. of large left valve.                         |
| " "                     | " " " Casts of opposite valves in block with                              |
|                         | <i>Pteronites subplanus</i> , fs. 3 a, c, same plate.                     |
| Near Clarksville, N. Y. | As <i>Avicula textilis</i> . Two left valves, imbedded.                   |
| Milwaukee, Wis.         | Internal cast of individual ; nearly entire.                              |
| Waldron, Ind.           | Internal cast right valve, bearing type of <i>Sagenella elegans</i> .     |
| Bridgeport, Ill.        | Internal cast of a large left valve.                                      |
| Racine, Wis.            | Internal casts of two left valves.                                        |
| Bridgeport, Ill.        | Internal cast of large left valve with part of right.                     |
| Waldron, Ind.           | Imperfect internal cast of the two valves.                                |
| Rochester, N. Y.        | As <i>Avicula (?) orbiculata</i> . Imprint of large right valve.          |
| .....                   | See <i>Ilionia sinuata</i> .                                              |
| .....                   | As <i>Posidonia (?) alata</i> .                                           |
| Rochester, N. Y.        | " " " A much exfoliated left valve, imbedded.                             |
| .....                   | See <i>Pterinopecten bellulus</i> .                                       |
| .....                   | " <i>Pterinea communis</i> .                                              |
| .....                   | " <i>Actinopteria emacerata</i> .                                         |
| .....                   | " <i>Pterinea Honeymani</i> .                                             |
| .....                   | " " <i>manticula</i> .                                                    |
| .....                   | " <i>Amphicælia orbiculata</i> .                                          |
| .....                   | " <i>Leptodesma rhomboideum</i> .                                         |
| .....                   | " <i>Pterinea securiformis</i> .                                          |
| .....                   | " <i>Aviculopecten spinulifer</i> .                                       |
| .....                   | " <i>Pteronites subplanus</i> .                                           |
| .....                   | " <i>Aviculopecten tenuilamellatus</i> .                                  |
| .....                   | " <i>Actinopteria textilis</i> .                                          |
| .....                   | " <i>Pterinea undata</i> .                                                |
| Helderberg Mts., N. Y.  | As <i>Avicula spinulifera</i> . Right valve, posterior wing lacking, imb. |
| Catskill Creek, N. Y.   | " " " Exterior imprint left valve, nearly entire.                         |
| Helderberg Mts., N. Y.  | " " <i>tenuilamellata</i> . Imprint right valve retaining a little shell. |
| Arisaig, N. S.          | Exterior-interior cast of left valve, imbedded.                           |
| " "                     | " " " right " "                                                           |
| " "                     | Interior imprint right valve in block with type of <i>Discina tenui-</i>  |
| " "                     | <i>lamellata</i> , var. <i>subplana</i> .                                 |
| " "                     | Exterior-interior cast of small right valve, imbedded.                    |
| " "                     | Exterior imprint of right valve.                                          |
| " "                     | Exterior-interior cast of large left valve, imbedded.                     |
| .....                   | A somewhat distorted individual.                                          |
| Near Clarksville, N. Y. | As <i>Conocardium rugosum</i> H. in 1st ed. of "Plates and Explanations." |
| .....                   | See " <i>inceptum</i> .                                                   |
| .....                   | For description, see page 188 of this Catalogue.                          |
| Wolcott, N. Y.          | As <i>Orthonota curta (?)</i> . Somewhat crushed cast, imbedded.          |
| " "                     | " <i>Tellinomya curta</i> . Ext.-int. impr. of two opp. valves, separate. |

## Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.       | REFERENCE.  |          |       |        |          |
|---------------|------------------|--------------------|----------------------------------|-------------|----------|-------|--------|----------|
|               |                  |                    |                                  | Work.       | Vol.     | P.    | Pl.    | Figs.    |
|               |                  |                    | <b>Cypricardia</b> Lamarck.      |             |          |       |        |          |
|               |                  |                    | <i>angusta</i> .....             | .....       | .....    | ..... | .....  | .....    |
|               |                  |                    | <i>orthonota</i> .....           | .....       | .....    | ..... | .....  | .....    |
| Cl.           | 1612             | Fig'd.             | ? sp. nov.....Hall.              | Pal. N. Y.  | 2        | 102   | 30     | 5a, b    |
|               |                  |                    | <b>Cypricardinia</b> Hall.       |             |          |       |        |          |
| Niag.         | 2077             | Type.              | <i>arata</i> .....Hall.          | N. Y. S. M. | 20       | 337   | 14     | 6        |
| L. H.         | 2530             | "                  | <i>dorsata</i> .....Hall.        | Pal. N. Y.  | 3        | 267   | 49a    | 2        |
| "             | 2528             | "                  | <i>lamellosa</i> .....Hall.      | " "         | 3        | 266   | 49a    | 1a-c     |
| " (?)         | 2531             | "                  | <i>sublamellosa</i> .....Hall.   | " "         | 3        | 267   | 50     | 1, ext.  |
| Niag.         | 1795             | "                  | <i>undulostriata</i> .....Hall.  | " "         | 2        | 284   | 59     | 6a, b    |
|               |                  |                    | <b>Cypricardites</b> Conrad.     |             |          |       |        |          |
| "             | 2069             | Type.              | ? quadrilatera.....Hall.         | N. Y. S. M. | 20       | 340   | 14     | 8-10     |
|               |                  |                    | <b>Ilionia</b> Billings.         |             |          |       |        |          |
| L. H.         | 2526             | "                  | <i>sinuata</i> .....Hall.        | Pal. N. Y.  | 3        | 265   | 49     | 3a-d     |
|               |                  |                    | <b>Leiopteria</b> Hall.          |             |          |       |        |          |
| "             | <u>2521</u><br>1 | "                  | <i>aviculoidea</i> .....Hall.    | " "         | 3        | 274   | 49     | 7a       |
| "             | <u>2521</u><br>2 | "                  | "....."                          | " "         | 3        | 274   | 49     | 8        |
|               |                  |                    | <b>Leptodesma</b> Hall.          |             |          |       |        |          |
| Cl.           | <u>1555</u><br>2 | "                  | <i>rhomboideum</i> .....Hall.    | " "         | 2        | 84    | 27     | 2a, b    |
| "             | <u>1555</u><br>1 | "                  | "....."                          | " "         | 2        | 84    | 27     | 2c       |
|               |                  |                    | <b>Leptodomus</b> McCoy.         |             |          |       |        |          |
| "             | 1647             | "                  | <i>aratus</i> .....Hall.         | C. N. & G.  | 5        | 152   | .....  | .....    |
|               |                  |                    | <b>Megalomus</b> Hall.           |             |          |       |        |          |
| Guelph        | 1798             | Gen. and Sp. Type. | <i>canadensis</i> .....Hall.     | Pal. N. Y.  | 2        | 343   | 80     | 1a-c     |
| "             | "                | "                  | "....."                          | " "         | 2        | 343   | { 80   | 1d, ext. |
| "             | "                | "                  | "....."                          | " "         | 2        | 343   | { 82   | 1h, int. |
| "             | "                | "                  | "....."                          | " "         | 2        | 343   | { 80   | 1e       |
| "             | "                | "                  | "....."                          | " "         | 2        | 343   | { 81   | 1a-f     |
| "             | "                | "                  | "....."                          | " "         | 2        | 343   | 82     | 1a-e     |
| "             | "                | "                  | "....."                          | " "         | 2        | 343   | 82     | 1f, g    |
| "             | "                | "                  | "....."                          | " "         | 2        | 343   | 82     | 1i, ext. |
| "             | "                | "                  | "....."                          | " "         | 5, pt. 1 | ..... | 52     | 10, int. |
|               |                  |                    | <b>Megambonia</b> Hall.          |             |          |       |        |          |
|               |                  |                    | <i>aviculoidea</i> .....         | .....       | .....    | ..... | .....  | .....    |
| Cl.           | 1646             | Type.              | ? cancellata.....Hall.           | C. N. & G.  | 5        | 153   | p. 151 | 12       |
| L. H.         | <u>2522</u><br>1 | "                  | <i>ovoidea</i> .....Hall.        | Pal. N. Y.  | 3        | 276   | 49a    | 4a, b    |
| "             | 2525             | "                  | <i>rhomboidea</i> .....Hall.     | " "         | 3        | 275   | 49     | 9, l. v. |
| "             | 2523             | "                  | <i>Spinneri</i> .....Hall.       | " "         | 3        | 274   | 49     | 5a-c     |
|               |                  |                    | <b>Modiolopsis</b> Hall.         |             |          |       |        |          |
| Niag.         | 2076             | "                  | <i>dictæa</i> .....Hall.         | N. Y. S. M. | 20       | 338   | 14     | 7        |
| L. H.         | 2527             | "                  | ? dubia.....Hall.                | Pal. N. Y.  | 3        | 264   | 49     | 2c-e     |
| Cl.           | 1562             | "                  | <i>machæriiformis</i> .....Hall. | Geol. N. Y. | 4th D.   | 76    | ct. 18 | 2        |
| "             | "                | "                  | "....."                          | Pal. N. Y.  | 2        | 85    | 27     | 8a, d    |
| "             | "                | "                  | "....."                          | " "         | 2        | 85    | 27     | 8b, c    |
| "             | "                | "                  | "....."                          | Geol. N. Y. | 4th D.   | 76    | ct. 18 | 6, card. |
| "             | "                | "                  | "....."                          | Pal. N. Y.  | 2        | 85    | 27     | 9, "     |
| Med.          | <u>1433</u><br>2 | Fig'd.             | <i>orthonota</i> (Con.)...Hall.  | Geol. N. Y. | 4th D.   | 48    | ct. 6  | 8, 9     |
| "             | "                | "                  | "....."                          | Pal. N. Y.  | 2        | 10    | 4 bis. | 1b, c    |
| "             | <u>1433</u><br>1 | "                  | "....."                          | " "         | 2        | 10    | 4 bis. | 1a       |
| Niag.         | 1947             | Type.              | <i>perlata</i> .....Hall.        | N. Y. S. M. | 28       | 172   | 27     | 3, 4     |



| LOCALITY.             | REMARKS.                                                                                                                                               |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                 | See <i>Modiolopsis machæriformis</i> .                                                                                                                 |
| .....                 | “ “ <i>orthonota</i> .                                                                                                                                 |
| Mohawk, N. Y.         | Somewhat distorted internal cast of individual.                                                                                                        |
| Bridgeport, Ill.      | Int. cast right v. On bl'k with type of <i>Modiolopsis recta</i> , fig. 5, same pl.                                                                    |
| Near Hudson, N. Y.    | Imperfect exterior-interior imprint of right valve.                                                                                                    |
| Clarksville, N. Y.    | Small individual.                                                                                                                                      |
| Albany Co., N. Y.     | Right valve, imbedded. From the Chemung?                                                                                                               |
| Lockport, N. Y.       | As <i>Modiolopsis</i> (?) <i>undulostriata</i> . Cast of right valve, imbedded.                                                                        |
| Bridgeport, Ill.      | Internal cast right valve.                                                                                                                             |
| Schoharie, N. Y.      | As <i>Anatina</i> (?) <i>sinuata</i> . Taken by Zittel as the type of the genus <i>Ilionia</i> . Two nearly entire internal casts and half of another. |
| “ “                   | As <i>Megambonia aviculoidea</i> . Small left valve, imb. with others.                                                                                 |
| Herkimer Co., N.Y.    | “ “ “ Exterior-interior imprint of left valve.<br>From Jerusalem Hill.                                                                                 |
| New Hartford, N. Y.   | As <i>Avicula rhomboidea</i> . Internal casts of two left valves.                                                                                      |
| Sodus, N. Y.          | “ “ “ Internal cast small left valve with a little shell.                                                                                              |
| Arisaig, N. S.        | “ <i>L. (Sanguinolites) aratus</i> . Cast of left valve, imbedded.                                                                                     |
| Galt, Ont.            | Anterior two-thirds of a large individual.                                                                                                             |
| “ “                   | Anterior half of a left valve.                                                                                                                         |
| “ “                   | Internal casts of one large and two medium-sized individuals.                                                                                          |
| “ “                   | Five internal casts of individuals.                                                                                                                    |
| “ “                   | Small individual, nearly entire.                                                                                                                       |
| “ “                   | Large, exfoliated left valve.                                                                                                                          |
| “ “                   | Large left valve, nearly entire.                                                                                                                       |
| .....                 | See <i>Leiopteria aviculoidea</i> .                                                                                                                    |
| Arisaig, N. S.        | Imperfect exterior-interior cast of left valve, imbedded.                                                                                              |
| Schoharie, N. Y.      | A nearly entire individual, considerably exfoliated.                                                                                                   |
| Near Schoharie, N. Y. | A much exfoliated individual.                                                                                                                          |
| Near Mohawk, N. Y.    | Internal cast of individual.                                                                                                                           |
| Bridgeport, Ill.      | Internal cast of left valve.                                                                                                                           |
| Schoharie, N. Y.      | Two valves and a group of five imb. with others; three blocks.                                                                                         |
| .....                 | As <i>Nucula machæriformis</i> .                                                                                                                       |
| Wolcott, N. Y.        | “ <i>Tellinomya</i> “ Exterior-interior cast of left valve.                                                                                            |
| “ “                   | “ “ “ “ “ “ right valve, and<br>of an individual, imbedded separately.                                                                                 |
| .....                 | As type of <i>Cypricardia ? angusta</i> Hall.                                                                                                          |
| Wolcott, N. Y.        | “ <i>Tellinomya machæriformis</i> . Int. cast indiv., comp. vertically.                                                                                |
| .....                 | “ <i>Cypricardia orthonota</i> .                                                                                                                       |
| Lockport, N. Y.       | Internal cast of individual, shows some external features.                                                                                             |
| Medina, N. Y.         | “ “ small right valve, imbedded.                                                                                                                       |
| Waldron, Ind.         | Exterior-interior imprint of right valve. See also <i>M. subalata</i> .                                                                                |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.            | REFERENCE.   |        |       |        |           |
|---------------|----------|--------------------|---------------------------------------|--------------|--------|-------|--------|-----------|
|               |          |                    |                                       | Work.        | Vol.   | P.    | Pl.    | Figs.     |
| Med.          | 1432     | Fig'd.             | <b>Modiolopsis</b> Hall— <i>Cont.</i> |              |        |       |        |           |
| "             | "        | "                  | ? primigenia (Con.) Hall.             | Pal. N. Y.   | 2      | 11    | 4 bis  | 2a, int.  |
| "             | "        | "                  | " " "                                 | " "          | 2      | 11    | 4 bis  | 2b, "     |
| Niag.         | 2075     | Type.              | recta ..... Hall.                     | N. Y. S. M.  | 20     | 338   | 14     | 4         |
| "             | "        | "                  | " " " "                               | " "          | 20     | 338   | 14     | 5         |
| Cl.           | 1644     | "                  | ? rhomboidea ..... Hall.              | Can. N. & G. | 5      | 148   | p. 149 | 6         |
| "             | 1560     | Type.              | subalata ..... Hall.                  | Pal. N. Y.   | 2      | 84    | 27     | 5         |
| "             | 1560     | "                  | " " " "                               | " "          | 2      | 84    | 27     | 6a, b     |
| Niag.         | 1560     | "                  | " " " "                               | N. Y. S. M.  | 28     | 173   | 27     | 4-6       |
| "             | 1560     | Fig'd.             | " ?..... Hall.                        | Pal. N. Y.   | 2      | 84    | 59     | 7, l. v.  |
| Cl.           | 1561     | Type.              | subcarinata ..... Hall.               | " "          | 2      | 101   | 30     | 3b, d, 4a |
| "             | 1645     | "                  | subnasuta ..... Hall.                 | Can. N. & G. | 5      | 148   | ....   | ....      |
|               |          |                    | undulostriata .....                   | .....        | .....  | ..... | .....  | .....     |
|               |          |                    | <b>Myalina</b> de Koninck.            |              |        |       |        |           |
|               |          |                    | mytiliformis .....                    | .....        | .....  | ..... | .....  | .....     |
| Cl.           | 1611     | Type.              | <b>Mytilarca</b> Hall.                |              |        |       |        |           |
|               |          |                    | mytiliformis ..... Hall.              | Pal. N. Y.   | 2      | 100   | 30     | 1a-d      |
| Niag.         | 1948     | "                  | sigillum ..... Hall.                  | N. Y. S. M.  | 28     | 174   | 27     | 10        |
|               |          |                    | <b>Nucula</b> Lamarck.                |              |        |       |        |           |
|               |          |                    | machæriiformis .....                  | .....        | .....  | ..... | .....  | .....     |
| Cl.           | 1637     | Type.              | <b>Nuculites</b> Conrad.              |              |        |       |        |           |
|               |          |                    | carinatus ..... Hall.                 | Can. N. & G. | 5      | 151   | ....   | 10        |
| "             | 1564     | "                  | <b>Orthodesma</b> Hall & Whitf.       |              |        |       |        |           |
|               | 2        |                    | curtum ..... Hall.                    | Geol. N. Y.  | 4th D. | 76    | ct. 18 | 1 r. v.   |
|               |          |                    |                                       | Pal. N. Y.   | 2      | 86    | 27     | 11a, b    |
|               |          |                    | <b>Orthonota</b> Conrad.              |              |        |       |        |           |
|               |          |                    | curta .....                           | .....        | .....  | ..... | .....  | .....     |
| Niag.         | 2070     | Gen. and Sp. Type. | <b>Palæocardia</b> Hall.              |              |        |       |        |           |
|               |          |                    | cyrdiformis ..... Hall.               | N. Y. S. M.  | 20     | 341   | 14     | 11, 12    |
|               |          |                    | <i>Posidonia</i> Bronn.               |              |        |       |        |           |
|               |          |                    | alata.                                | .....        | .....  | ..... | .....  | .....     |
|               |          |                    | <b>Posidonomya</b> Bronn.             |              |        |       |        |           |
|               |          |                    | rhomboidea .....                      | .....        | .....  | ..... | .....  | .....     |
|               |          |                    | <b>Pterinea</b> , Goldfuss.           |              |        |       |        |           |
|               |          |                    | brisa .....                           | .....        | .....  | ..... | .....  | .....     |
| L. H.         | 2514     | Type.              | communis ..... Hall.                  | Pal. N. Y.   | 3      | 286   | 52     | 1         |
| "             | 2514     | "                  | " " " "                               | " "          | 3      | 286   | 52     | 3, 6      |
| "             | 2        | "                  | " " " "                               | " "          | 3      | 286   | 52     | 4, 5, 7   |
| "             | "        | "                  | " " " "                               | " "          | 3      | 286   | 53     | 4         |
| Cl.           | 1635     | "                  | Honeymani ..... Hall.                 | Can. N. & G. | 5      | 153   | p. 154 | 13        |
| L. H.         | 2517     | "                  | manticula ..... Hall.                 | Pal. N. Y.   | 3      | 284   | 51     | 8         |
| "             | 2515     | "                  | securiformis ..... Hall.              | " "          | 3      | 290   | 53     | 12        |
| "             | 2515     | "                  | " " " "                               | " "          | 3      | 290   | 53     | 13, 14    |
| Niag.         | 1950     | Fig'd.             | striæcosta (McChes.)..H.              | N. Y. S. M.  | 20     | 337   | 14     | 1         |
| "             | 1950     | "                  | " " " Hall.                           | " "          | 28     | 173   | 27     | 7, 8      |
| "             | "        | "                  | " " " "                               | " "          | 28     | 173   | 27     | 9         |
| Niag.         | 1793     | Type.              | ? undata ..... Hall.                  | Pal. N. Y.   | 2      | 283   | 59     | 2         |



| LOCALITY.              | REMARKS.                                                                                                                               |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Lockport, N. Y.        | Internal cast of left valve.                                                                                                           |
| “ “                    | “ “ “ imbedded with type of <i>Orthoceras multi-septum</i> , fig. 8b, same plate. See also <i>Actinopteria emacerata</i> .             |
| Bridgeport, Ill.       | Internal cast of small right valve.                                                                                                    |
| “ “                    | Very perfect internal cast left valve in block with type of <i>Cypricardinia arata</i> , fig. 6, same plate.                           |
| Arisaig, N. S.         | Sharp internal cast left valve, imb. Series has two unfigured types.                                                                   |
| Rochester, N. Y.       | Internal casts of two opposite valves, imbedded.                                                                                       |
| Wolcott, N. Y.         | “ “ “ right valves.                                                                                                                    |
| Waldron, Ind.          | Fig. 4 as <i>Modiolopsis perlata</i> , by error. Ext.-int. impr. of two opp. v.                                                        |
| Lockport? N. Y.        | Imprint of left valve. Probably from Wolcott, N. Y.                                                                                    |
| Mohawk, N. Y.          | Exterior-interior imprints of one right and two left valves.                                                                           |
| Arisaig, N. S.         | “ “ cast of right valve imbedded.                                                                                                      |
| .....                  | See <i>Cypricardinia undulostriata</i> .                                                                                               |
| .....                  | “ <i>Mytilarca mytiliformis</i> .                                                                                                      |
| Mohawk, N. Y.          | As <i>Myalina mytiliformis</i> . Two exterior-interior casts of right valves, and one of an individual somewhat compressed vertically. |
| Waldron, Ind.          | Internal cast of a small right valve, imbedded.                                                                                        |
| .....                  | See <i>Modiolopsis machæriiformis</i> .                                                                                                |
| Arisaig, N. S.         | As <i>Nuculites (Orthonota) carinatus</i> . Ext.-int. cast of a left valve.                                                            |
| .....                  | “ <i>Orthonota curta</i> .                                                                                                             |
| Wolcott, N. Y.         | “ “ Exterior-interior imprint of opposite valves.                                                                                      |
| .....                  | See <i>Orthodesma curtum</i> and <i>Cuneamya alveata</i> .                                                                             |
| Near Milwaukee, Wis.   | Internal cast of an individual.                                                                                                        |
| .....                  | = <i>Posidonomya</i> .                                                                                                                 |
| .....                  | See <i>Anodontopsis alata</i> .                                                                                                        |
| .....                  | “ <i>Pterinopecten rhomboideus</i> .                                                                                                   |
| .....                  | “ <i>Pterinea striacosta</i> .                                                                                                         |
| Near Hudson, N. Y.     | As <i>Avicula communis</i> . Ext.-int. impr. left v., trans. compressed.                                                               |
| Nr. Clarksville, N. Y. | “ “ “ Two left valves imb. so as to show interior.                                                                                     |
| “ “ “                  | “ “ “ Casts of interior of two l. and one r. valve.                                                                                    |
| “ “ “                  | “ “ “ Internal cast of left valve.                                                                                                     |
| Arisaig, N. S.         | “ “ <i>Honeymani</i> . Exterior-interior cast of left valve.                                                                           |
| Near Hudson, N. Y.     | “ “ <i>manticula</i> . Imperfect left valve, imbedded.                                                                                 |
| “ “ “                  | “ “ <i>securiformis</i> . Weathered imprint of large left valve.                                                                       |
| Nr. Clarksville, N. Y. | “ “ “ Obscure imprint of a right (?) valve and imperfect imprint of a left valve.                                                      |
| Bridgeport, Ill.       | As type of <i>P. brisa</i> Hall. Int. cast left valve, with some shell.                                                                |
| Waldron, Ind.          | “ “ “ “ Two left valves, imbedded.                                                                                                     |
| “ “ “                  | “ “ “ “ Internal cast left valve.                                                                                                      |
| Rochester, N. Y.       | “ <i>Avicula undata</i> . Exterior-interior cast of a left valve, imbedded.                                                            |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                       | REFERENCE.   |      |     |      |              |
|---------------|------------------|--------------------|--------------------------------------------------|--------------|------|-----|------|--------------|
|               |                  |                    |                                                  | Work.        | Vol. | P.  | Pl.  | Figs.        |
| L. H.         | 2506             | Type.              | <b>Pterinopecten</b> Hall.<br>bellulus.....Hall. | Pal. N. Y.   | 3    | 289 | 53   | 8            |
| Niag.         | 1794             | "                  | ? rhomboideus.....Hall.                          | " "          | 2    | 284 | 59   | 5, l. v.     |
| "             | 1792             | "                  | <b>Pteronites</b> Hall.<br>subplanus .....Hall.  | " "          | 2    | 283 | 59   | 3a, c        |
| "             | "                | "                  | " ..... "                                        | " "          | 2    | 283 | 59   | 3b           |
| Cl.           | $\frac{1559}{2}$ | Gen. and Sp. Type. | <b>Pyrenomæus</b> Hall.<br>cuneatus .....Hall.   | " "          | 2    | 87  | 27   | 3            |
| "             | $\frac{1559}{1}$ | "                  | " ..... "                                        | " "          | 2    | 87  | 27   | 12a-c        |
| "             | 1636             | Type.              | <b>Tellinomya</b> Hall.<br>attenuata.....Hall.   | Can. N. & G. | 5    | 151 | .... | 11           |
| Cl.           | 1613             | Type.              | curta .....<br>elliptica.....Hall.               | Pal. N. Y.   | 2    | 102 | 30   | 4b, r. v.    |
| "             | 1558             | "                  | lata.....Hall.                                   | " "          | 2    | 85  | 27   | 7 r. v.      |
| L. H.         | 2532             | Type.              | machæriiformis.....<br>nucleiformis .....Hall.   | Pal. N. Y.   | 3    | 263 | 49   | 1 int. l. v. |

Class GASTROPODA.

|        |                  |        |                                                                  |             |        |       |        |           |
|--------|------------------|--------|------------------------------------------------------------------|-------------|--------|-------|--------|-----------|
|        |                  |        | <i>Acroculia</i> Phillips.<br>angulata .....<br>niagarensis..... | .....       | .....  | ..... | .....  | .....     |
| Niag.  | 1954             | Type.  | <b>Bellerophon</b> Montfort.<br>tuber .....Hall.                 | N. Y. S. M. | 28     | 177   | 30     | 19, 20    |
| Med.   | $\frac{1439}{2}$ | Fig'd. | <b>Bucanella</b> Meek.<br>trilobata (Con.)....Hall.              | Pal. N. Y.  | 2      | 13    | 4 bis  | 3d, 5b    |
| Cl.    | $\frac{1439}{3}$ | "      | " " " "                                                          | " "         | 2      | 93    | 28     | 10a       |
| "      | "                | "      | " " " "                                                          | " "         | 2      | 93    | 28     | 10b       |
| Guelph | 2235             | Type.  | <b>Bucania</b> Hall.<br>angustata.....Hall.                      | " "         | 2      | 349   | 84     | 6a, b     |
| Niag.  | 2100             | Fig'd. | chicagoensis(McChes.)H.                                          | N. Y. S. M. | 20     | 347   | 15     | 23, 24    |
| L. H.  | $\frac{2588}{1}$ | Type.  | profunda .....Hall.                                              | Pal. N. Y.  | 3      | 341   | 68     | 2a, b     |
| "      | $\frac{2588}{2}$ | "      | " ..... "                                                        | " "         | 3      | 341   | 68     | 3a-c      |
| Cl.    | 1573             | "      | stigmosa.....Hall.                                               | " "         | 2      | 92    | 28     | 8a-e      |
|        |                  |        | trilobata .....                                                  | .....       | .....  | ..... | .....  | .....     |
| Cl.    | $\frac{1569}{1}$ | Type.  | <b>Cyclonema</b> Hall.<br>cancellatum.....Hall.                  | Geol. N. Y. | 4th D. | 72    | ct. 17 | 5, 6      |
| "      | "                | "      | " ..... "                                                        | Pal. N. Y.  | 2      | 90    | 28     | 1c, f-h   |
| "      | $\frac{1569}{2}$ | Fig'd. | " ?..... "                                                       | " "         | 2      | 90    | 28     | 1 b, d, e |
| Niag.  | 2081             | Type.  | ? elevatum.....Hall.                                             | N. Y. S. M. | 20     | 342   | 15     | 4         |
| Med.   | $\frac{1434}{1}$ | Fig'd. | pervetustum (Con.)Hall.                                          | Pal. N. Y.  | 2      | 12    | 4 bis  | 3a        |
| "      | $\frac{1434}{2}$ | "      | " " " "                                                          | " "         | 2      | 12    | 4 bis  | 3d        |
| Guelph | $\frac{2227}{1}$ | Type.  | sulcatum.....Hall.                                               | " "         | 2      | 347   | 84     | 1a, b, d  |
| "      | $\frac{2227}{2}$ | "      | " ..... "                                                        | " "         | 2      | 347   | 84     | 1c        |
| Cl.    | 1570             | "      | ventricosum .....Hall.                                           | " "         | 2      | 90    | 28     | 2a-c      |



| LOCALITY.              | REMARKS.                                                                                                                                                         |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Helderberg Mts., N. Y. | As <i>Avicula bellula</i> . Exterior-interior imprint of both valves expanded. The counterpart also is present.                                                  |
| Lockport, N. Y.        | As <i>Posidonomya</i> (?) <i>rhomboidea</i> . Ext.-int. cast of a left valve.                                                                                    |
| " "                    | " <i>Avicula subplana</i> . Imprint of two right and one left valve in block, with <i>Actinopteria emacerata</i> , figs. 1a, d, same plate.                      |
| " "                    | As <i>Avicula subplana</i> . Cast of a large left valve.                                                                                                         |
| Wolcott, N. Y.         | Exterior-interior cast of a small left valve, imbedded.                                                                                                          |
| New Hartford, N. Y.    | Internal casts of two left and a right v.; show some ext. features.                                                                                              |
| Arisaig, N. S.         | Internal cast of a left valve retaining some shell.                                                                                                              |
| .....                  | See <i>Cuneamya curta</i> .                                                                                                                                      |
| Mohawk, N. Y.          | Exterior-interior cast of a right valve, imbedded.                                                                                                               |
| Wolcott, N. Y.         | Internal cast of a right valve, imbedded.                                                                                                                        |
| .....                  | See <i>Modiolopsis macheriformis</i> .                                                                                                                           |
| Near Schoharie, N. Y.  | Internal cast of a left valve.                                                                                                                                   |
| .....                  | = <i>Platyceras</i> .                                                                                                                                            |
| .....                  | See " <i>angulatum</i> .                                                                                                                                         |
| .....                  | " " <i>niagarensis</i> .                                                                                                                                         |
| Waldron, Ind.          | Cast of a small individual.                                                                                                                                      |
| Lockport, N. Y.        | As <i>Bucania</i> . Int. cast in block with <i>Cyclonema pervetusta</i> , fig. 3d, same pl. Fig. 5a seems to have been made from another specimen.               |
| New Hartford, N. Y.    | Internal cast, imbedded.                                                                                                                                         |
| " " "                  | Very-large internal cast. May not be of this species.                                                                                                            |
| Galt, Ont.             | Internal cast of large individual.                                                                                                                               |
| Bridgeport, Ill.       | As type of <i>Tremanotus alpheus</i> Hall. Cast.                                                                                                                 |
| Schoharie, N. Y.       | Weathered internal cast.                                                                                                                                         |
| Carlisle, N. Y.        | Inner volutions of a large individual.                                                                                                                           |
| Lockport, N. Y.        | A distorted adult, and a small internal cast.                                                                                                                    |
| .....                  | See <i>Bucanella trilobata</i> .                                                                                                                                 |
| .....                  | As <i>Littorina cancellata</i> .                                                                                                                                 |
| Rochester, N. Y.       | An adult, and a young individual.                                                                                                                                |
| " "                    | Two individuals.                                                                                                                                                 |
| Lockport, N. Y.        | Large internal cast retaining small fragment of shell.                                                                                                           |
| Racine, Wis.           | Internal cast.                                                                                                                                                   |
| Lockport, N. Y.        | As <i>Pleurotomaria</i> (?) <i>pervetusta</i> . Internal cast imbedded. Figs. 3b, c seem to have been made from another individual.                              |
| " "                    | As <i>Pleurotomaria</i> (?) <i>pervetusta</i> . Many int. casts in bl'k, pt. of wh. was fig'd. Bl'k also contains <i>Bucanella trilobata</i> , fig. 5b, same pl. |
| Galt, Ont.             | A worn adult, and the exterior imprint of part of another.                                                                                                       |
| Newark, N. Y.          | Small, somewhat imperfect individual, imbedded.                                                                                                                  |
| Sodus, N. Y.           | Entire adult.                                                                                                                                                    |

## Class GASTROPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                              | REFERENCE.              |                     |                       |          |           |
|------------------|------------------|----------------------|-------------------------------------------------------------------------|-------------------------|---------------------|-----------------------|----------|-----------|
|                  |                  |                      |                                                                         | Work.                   | Vol.                | P.                    | Pl.      | Figs.     |
| Niag.            | 1953             | Type.                | <b>Cyrtolites</b> Conrad.<br><i>sinuosus</i> .....Hall.                 | N. Y. S. M.             | 28                  | 178                   | 30       | 16-18     |
| "                | 2079             | "                    | <b>Eunema</b> Salter.<br><i>? trilineatum</i> .....Hall.                | " "                     | 20                  | 346                   | 15       | 3         |
| L. H.            | <u>2577</u><br>2 | "                    | <b>Euomphalus</b> Sowerby.<br><i>decollatus</i> (Hall) Miller.<br>Hall. | Am. P. F.<br>Pal. N. Y. | .....<br>3          | 244<br>340            | 65       | 8         |
| "                | <u>2577</u><br>1 | "                    | "<br><i>disjunctus</i> .....<br><i>hemisphericus</i> .....              | " "<br>.....<br>.....   | 3<br>.....<br>..... | 340<br>.....<br>..... | 67       | 4a-c      |
| L. H.            | <u>2578</u><br>2 | Type.                | <b>Holopea</b> Hall.<br><i>antiqua</i> .....Hall.                       | Pal. N. Y.              | 3                   | 294                   | 54       | 2a        |
| "                | <u>2578</u><br>1 | "                    | "<br>.....                                                              | " "                     | 3                   | 294                   | 54       | 2b, 3a, b |
| Med.             | 1436             | "                    | <i>conoidea</i> .....Hall.                                              | " "                     | 2                   | 13                    | 4        | 7         |
| Niag.            | 2080             | Fig'd.               | <i>guelphensis</i> (Bill.) Hall.                                        | N. Y. S. M.             | 20                  | 343                   | 15       | 18        |
| Cl.              | 1648             | Type.                | <i>reversa</i> .....Hall.                                               | Can. N. & G.            | 5                   | 154                   | ....     | 14        |
| L. H.            | 2579             | "                    | <i>subconica</i> .....Hall.                                             | Pal. N. Y.              | 3                   | 294                   | 54       | 1a, b     |
|                  |                  |                      | <b>Littorina</b> Férussac.<br><i>cancellata</i> .....                   | .....                   | .....               | .....                 | .....    | .....     |
| L. H.            | 2581             | Type.                | <b>Loxonema</b> Phillips.<br><i>attenuatum</i> .....Hall.               | Pal. N. Y.              | 3                   | 296                   | 54<br>67 | 8<br>3    |
| "                | 2583             | Type.                | <i>Boydii</i> .....<br><i>? compactum</i> .....Hall.                    | Pal. N. Y.              | 3                   | 297                   | 54       | 12        |
| "                | 2584             | "                    | <i>Fitchi</i> .....Hall.                                                | " "                     | 3                   | 296                   | 54       | 9, 11a    |
| Niag.            | 2098             | "                    | <i>leda</i> .....Hall.                                                  | N. Y. S. M.             | 20                  | 367                   | 15       | 2         |
|                  |                  |                      | "<br>.....                                                              | " "                     | 20                  | 346                   | ....     | .....     |
| L. H.            | 2582             | "                    | <i>planogyratum</i> .....Hall.                                          | Pal. N. Y.              | 3                   | 298                   | 54       | 13        |
|                  |                  |                      | sp.....                                                                 | N. Y. S. M.             | 20                  | 346                   | ....     | .....     |
| Cl.              | 1649             | Type.                | <b>Murchisonia</b> d'A. & de V.<br><i>aciculata</i> .....Hall.          | Can. N. & G.            | 5                   | 154                   | ....     | .....     |
| "                | 1650             | "                    | <i>arisaigensis</i> .....Hall.                                          | " "                     | 5                   | 154                   | ....     | .....     |
| L. H.            | 2587             | "                    | <i>bilirata</i> .....Hall.                                              | Pal. N. Y.              | 3                   | 299                   | 55       | 2         |
| Guelph           | 2230             | Type.                | <i>bivittata</i> .....Hall.                                             | " "                     | 2                   | 345                   | 83       | 1a        |
| "                | "                | "                    | "<br>.....                                                              | " "                     | 2                   | 345                   | 83       | 1b        |
| "                | 2234             | "                    | <i>Boydii</i> .....Hall.                                                | Geol. N. Y.             | 4th D.              | 138                   | ct. 54   | 3         |
|                  |                  |                      | "<br>.....                                                              | Pal. N. Y.              | 2                   | 346                   | 83       | 3         |
| Niag.            | <u>2095</u><br>1 | Type.                | <i>conoidea</i> .....<br><i>Conradi</i> .....Hall.                      | N. Y. S. M.             | 20                  | 344                   | 15       | 19        |
| L. H.            | 2586             | "                    | <i>extenuata</i> .....Hall.                                             | Pal. N. Y.              | 3                   | 298                   | 54       | 16        |
| Niag.            | 2097             | "                    | <i>Laphami</i> .....Hall.                                               | Geol. Wis.              | 1861                | 36                    | .....    | .....     |
|                  |                  |                      | "<br>.....                                                              | N. Y. S. M.             | 20                  | 366                   | 15       | 20        |
| Guelph           | 2233             | "                    | <i>Logani</i> .....Hall.                                                | Pal. N. Y.              | 2                   | 346                   | 83       | 4a        |
| "                | "                | "                    | "<br>.....                                                              | " "                     | 2                   | 346                   | 83       | 4b        |
| "                | 2096             | "                    | <i>longispira</i> .....Hall.                                            | " "                     | 2                   | 345                   | 83       | 2a        |
| "                | "                | "                    | "<br>.....                                                              | " "                     | 2                   | 345                   | 83       | 2b        |
| "                | 2232             | "                    | <i>macrospira</i> .....Hall.                                            | " "                     | 2                   | 346                   | 83       | 5         |
| Cl.              | <u>1572</u><br>6 | Fig'd.               | <i>subulata</i> (Con.).....Hall.                                        | " "                     | 2                   | 91                    | 28       | 7a        |
| "                | <u>1572</u><br>3 | "                    | "<br>.....                                                              | " "                     | 2                   | 91                    | 28       | 7b        |
| "                | <u>1572</u><br>4 | "                    | "<br>.....                                                              | " "                     | 2                   | 91                    | 28       | 7d        |
| Guelph           | 2231             | Type.                | <i>turritiformis</i> .....Hall.                                         | " "                     | 2                   | 347                   | 83       | 6a, b     |
| L. H.            | 2534             | Type.                | <b>Platyceras</b> Conrad.<br><i>agreste</i> .....Hall.                  | " "                     | 3                   | 338                   | 65       | 4, 7      |
| Niag.            | <u>1801</u><br>1 | "                    | <i>angulatum</i> .....Hall.                                             | " "                     | 2                   | 289                   | 60       | 4a, b     |
| "                | "                | "                    | "<br>.....                                                              | " "                     | 2                   | 289                   | 60       | 4c, d     |



| LOCALITY.             | REMARKS.                                                               |
|-----------------------|------------------------------------------------------------------------|
| Waldron, Ind.         | Internal cast.                                                         |
| Racine, Wis.          | Exterior imprint. Figured from gutta-percha squeeze.                   |
| Schoharie, N. Y.      | As <i>Euomphalus disjunctus</i> Hall. Name preoccupied. Cast, imb.     |
| Carlisle, N. Y.       | " " " " Cast, imbedded.                                                |
| .....                 | See <i>Euomphalus decollatus</i> .                                     |
| .....                 | " <i>Platystoma hemisphericum</i> .                                    |
| Litchfield, N. Y.     | Internal cast, imbedded with many others.                              |
| Nr. Schoharie, N. Y.  | Three internal casts. One is very large for the species.               |
| Lockport, N. Y.       | As <i>Murchisonia</i> ? <i>conoidea</i> . Internal cast, imbedded.     |
| Racine, Wis.          | Internal cast.                                                         |
| Arisaig, N. S.        | " " imbedded.                                                          |
| Schoharie, N. Y.      | Two individuals preserving aperture in part.                           |
| .....                 | See <i>Cyclonema cancellatum</i> .                                     |
| Carlisle, N. Y.       | Two imperfect internal casts.                                          |
| .....                 | See <i>Murchisonia</i> .                                               |
| Near Schoharie, N. Y. | Internal cast of 13 volutions, preserving shell along some of sutures. |
| Schoharie, N. Y.      | Two compressed internal casts.                                         |
| Wauwatosa, Wis.       | As <i>Loxonema</i> ? sp. Exterior imprint of eight volutions.          |
| Near Schoharie, N. Y. | An imbedded adult, imperfect at apex and base.                         |
| .....                 | See <i>Loxonema Leda</i> .                                             |
| Arisaig, N. S.        | Two individuals retaining part of shell, imbedded.                     |
| " "                   | Two internal casts with some shell, imbedded.                          |
| Albany Co., N. Y.     | Exterior-interior cast of two volutions.                               |
| Galt, Ont.            | Internal cast of six volutions.                                        |
| " "                   | Five volutions imbedded so as to show longit. sect.                    |
| .....                 | As <i>Loxonema Boydi</i> .                                             |
| Newark, N. Y.         | Internal cast showing aperture.                                        |
| .....                 | See <i>Holopea conoidea</i> .                                          |
| Racine, Wis.          | External imprint of seven volutions.                                   |
| Schoharie, N. Y.      | A much weathered individual, imbedded.                                 |
| Racine, Wis.          | Ext. impr. five volutions. Two unfig'd int. casts are in the series.   |
| Galt, Ont.            | Upper part is matrix, lower part is int. cast preserving columella.    |
| " "                   | Internal cast of six volutions.                                        |
| " "                   | Exterior imprint of shell and columella near base.                     |
| " "                   | Longitudinal section, imbedded.                                        |
| " "                   | Exterior imprint of four and a half volutions.                         |
| Wolcott, N. Y.        | Internal cast of young individual, imbedded.                           |
| Reynale's Basin, N.Y. | Internal cast of individual, imbedded.                                 |
| Medina, N. Y.         | Large, weatherworn individual, imbedded.                               |
| Galt, Ont.            | Two fragmentary internal casts.                                        |
| Near Carlisle, N. Y.  | A small and a large cast, each with some shell.                        |
| Lockport, N. Y.       | As <i>Acroculia angulata</i> . Small internal cast, with some shell.   |
| " "                   | " " " Individual, with shell well preserved.                           |





| LOCALITY.              | REMARKS.                                                                                        |
|------------------------|-------------------------------------------------------------------------------------------------|
| Nr. Schoharie, N. Y.   | Large, somewhat crushed. Shows some of exterior.                                                |
| Near Hudson, N. Y.     | A large individual, somewhat broken.                                                            |
| Nr. Clarksville, N. Y. | A nearly perfect individual.                                                                    |
| Helderberg Mts., N. Y. | An entire individual.                                                                           |
| Near Schoharie, N. Y.  | Four internal casts ; two imbedded.                                                             |
| Nr. Clarksville, N. Y. | Internal cast, imbedded.                                                                        |
| Carlisle, N. Y.        | Internal cast with a very little shell attached.                                                |
| " "                    | Internal cast retaining small portions of shell.                                                |
| Nr. Clarksville, N. Y. | Seven individuals of various sizes and degrees of perfection.                                   |
| Near Schoharie, N. Y.  | Two individuals preserving much shell.                                                          |
| " " "                  | Large individual. Another unfigured indiv. is in the type series.                               |
| Schoharie, N. Y.       | Large and nearly perf., imb. Prob. the spec. used by Mr. Conrad.                                |
| " "                    | Large individual, imbedded.                                                                     |
| Catskill Creek, N. Y.  | Two internal casts retaining fragments of shell.                                                |
| Near Schoharie, N. Y.  | Large, somewhat imperfect, crushed.                                                             |
| Nr. Clarksville, N. Y. | Two nearly perfect and one (6g) weathered individual.                                           |
| " " "                  | Upper part of an individual.                                                                    |
| Schoharie, N. Y.       | Large individual without apex.                                                                  |
| Near Schoharie, N. Y.  | Three individuals.                                                                              |
| { Alb. & Schoharie }   | A small and a large individual, the latter partly exfoliated.                                   |
| { Cos., N. Y. }        |                                                                                                 |
| Nr. Hudson, N. Y.      | Internal cast. A larger unfigured cast is in the series.                                        |
| Lockport, N. Y.        | As <i>Acroculia niagarensis</i> H. Somewhat crushed and exfol., imb.                            |
| Near Hudson, N. Y.     | Large internal cast.                                                                            |
| Near Schoharie, N. Y.  | Part of peristome of a very large shell.                                                        |
| Nr. Clarksville, N. Y. | Entire.                                                                                         |
| Near Schoharie, N. Y.  | Weathered individual, imbedded.                                                                 |
| Nr. Clarksville, N. Y. | Fig. 1c given as <i>Platyceras platystoma</i> H. by error. A young individ.                     |
| Near Schoharie, N. Y.  | A nearly entire individ. and an int. cast. See also <i>Platyceras</i><br>[ <i>pileiforme</i> .] |
| " " "                  | Entire.                                                                                         |
| " " "                  | Two individuals.                                                                                |
| " " "                  | Two internal casts, one retaining some shell.                                                   |
| Schoharie, N. Y.       | A considerably exfoliated individual.                                                           |
| " "                    | Large individual with part of shell gone.                                                       |
| Near Hudson, N. Y.     | Internal cast retaining some shell.                                                             |
| Nr. Clarksville, N. Y. | " " " " "                                                                                       |
| Schoharie, N. Y.       | Large individual, somewhat exfoliated.                                                          |
| Near Schoharie, N. Y.  | Three individuals.                                                                              |
| Schoharie, N. Y.       | Individual, partly exfoliated.                                                                  |
| Nr. Clarksville, N. Y. | Five individuals.                                                                               |
| Near Hudson, N. Y.     | Part of internal cast of a large individual.                                                    |
| Schoharie, N. Y.       | A nearly perfect individual.                                                                    |
| Near Schoharie, N. Y.  | Internal cast.                                                                                  |
| " " "                  | Two individuals.                                                                                |
| Catskill Creek, N. Y.  | Three internal casts retaining some shell.                                                      |
| Helderberg Mts., N. Y. | Entire individual.                                                                              |
| Near Hudson, N. Y.     | Very large, imbedded. Part of silicified shell is gone.                                         |
| The Helderbergs, N. Y. | Exfoliated individual.                                                                          |
| Near Schoharie, N. Y.  | Internal cast.                                                                                  |
| Catskill Creek, N. Y.  | Internal cast with a very little shell on it.                                                   |
| Schoharie, N. Y.       | Nearly entire, imbedded.                                                                        |

## Class GASTROPODA—Continued.

| Geol. Subdiv.                  | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.   | REFERENCE.  |                |       |        |           |
|--------------------------------|------------------|-------------------|------------------------------|-------------|----------------|-------|--------|-----------|
|                                |                  |                   |                              | Work.       | Vol.           | P.    | Pl.    | Figs.     |
| <b>Platystoma</b> Con.—Cont.   |                  |                   |                              |             |                |       |        |           |
| L. H.                          | <u>2570</u>      | Type.             | depressum .....Hall.         | Pal. N. Y.  | 3              | 301   | 55     | 4b        |
| Niag.                          | <u>1799</u><br>1 | "                 | hemisphericum ....Hall.      | Geol. N. Y. | 4th D.         | 110   | ct. 39 | 1, 2      |
| "                              | <u>1567</u>      | "                 | "                            | Pal. N. Y.  | 2              | 288   | 60     | 2a, b     |
| "                              | <u>1567</u>      | "                 | niagarensis .....Hall.       | " "         | 2              | 287   | 60     | 1a-g, i-r |
| "                              | <u>1567</u>      | "                 | "                            | " "         | 2              | 287   | 60     | 1s, t, u  |
| "                              | <u>1567</u>      | "                 | "                            | " "         | 2              | 287   | 60     | IV        |
| "                              | <u>1567</u>      | "                 | "                            | N. Y. S. M. | 28             | 175   | 28     | I-4       |
| "                              | "                | "                 | "                            | " "         | 28             | 175   | 28     | 5-12      |
| "                              | "                | "                 | "                            | " "         | 28             | 175   | 29     | I-10      |
| "                              | "                | "                 | "                            | " "         | 28             | 175   | 29     | 11-15     |
| "                              | "                | Fig'd.            | " ?....."                    | " "         | 28             | 175   | 28     | 13        |
| Cl.                            | <u>1567</u><br>1 | "                 | "                            | Pal. N. Y.  | 2              | 103   | 31     | 3a, b     |
| Niag.                          | <u>1802</u><br>2 | Type.             | plebeium.....Hall.           | N. Y. S. M. | 28             | 175   | 28     | 14, 15    |
| L. H.                          | 2571             | "                 | ? subangulatum ...Hall.      | Pal. N. Y.  | 3              | 301   | 55     | 3a, b     |
| "                              | <u>2618</u><br>1 | Fig'd.            | ventricosum (Con.)Hall.      | " "         | 3              | 300   | 55     | 9a-d      |
|                                |                  |                   | sp .....                     | " "         | 2              | ....  | 31     | 3a, b     |
| <b>Pleurotomaria</b> Defrance. |                  |                   |                              |             |                |       |        |           |
| Niag.                          | <u>2092</u><br>3 | Type.             | axion .....Hall.             | N. Y. S. M. | 20             | 344   | 15     | 17        |
| Guelph                         | 2228             | "                 | bispiralis .....Hall.        | Pal. N. Y.  | 2              | 348   | 84     | 2a, b     |
| Niag.                          | 2090             | "                 | Halei.....Hall.              | Geol. Wis.  | 1861           | 34    |        |           |
| "                              | 2091             | "                 | "                            | N. Y. S. M. | 20             | 364   | 15     | 13, 14    |
| "                              | 2091             | "                 | Hoyi .....Hall.              | Geol. Wis.  | 1861           | 35    |        |           |
| "                              | "                | "                 | "                            | N. Y. S. M. | 20             | 364   | 15     | 10        |
| "                              | "                | "                 | " .....                      | " "         | 20,<br>2d ed.  | 393   | 25     | 11, 12    |
| "                              | 2089             | "                 | idia.....Hall.               | Geol. Wis.  | 1861           | 35    |        |           |
| L. H.                          | <u>2585</u><br>2 | Type.             | labrosa .....Hall.           | N. Y. S. M. | 20             | 365   | 15     | 15, 16    |
| "                              | <u>2585</u><br>1 | "                 | "                            | Pal. N. Y.  | 3              | 339   | 66     | 1a, b     |
| "                              |                  | "                 | "                            | " "         | 3              | 339   | 66     | 2-5       |
|                                |                  |                   | labrosa, var. occidentis.... |             | .....          | ..... | .....  | .....     |
| Med.                           | <u>1435</u><br>2 | Type.             | litorea .....Hall.           | " "         | 2              | 12    | 4 bis  | 4a, b     |
| Niag.                          | <u>2093</u><br>1 | "                 | occidentis.....Hall.         | N. Y. S. M. | 20             | 364   | 15     | 11        |
| "                              | "                | "                 | "                            | " "         | 20             | 343   | .....  | .....     |
| "                              | "                | "                 | " .....                      | " "         | 20             | 364   | 15     | 12        |
| "                              | "                | "                 | "                            | " "         | 20             | 343   | .....  | .....     |
| "                              | <u>2093</u><br>3 | "                 | " .....                      | " "         | 20,<br>2d ed.  | 392   | 25     | 9, 10     |
| Guelph                         | 2229             | "                 | perlata .....Hall.           | Pal. N. Y.  | 2              | 349   | 84     | 5a-c      |
|                                |                  |                   | pervetusta .....             |             | .....          | ..... | .....  | .....     |
|                                |                  |                   | solarioides .....            |             | .....          | ..... | .....  | .....     |
| Guelph                         | 2228             | Fig'd.            | sp.....Hall.                 | Pal. N. Y.  | 2              | 348   | 84     | 3         |
| <b>Straparollus</b> Montfort.  |                  |                   |                              |             |                |       |        |           |
| Niag.                          | <u>2087</u><br>2 | Type.             | mopsus.....Hall.             | N. Y. S. M. | 20             | 342   | 15     | 22        |
| Guelph                         | 2225             | "                 | solarioides .....Hall.       | Pal. N. Y.  | 2              | 348   | 84     | 4a, b     |
| <b>Strophostylus</b> Hall.     |                  |                   |                              |             |                |       |        |           |
| Niag.                          | 1952             | "                 | cyclostomus .....Hall.       | T. A. I.    | 4              | 218   |        |           |
| "                              |                  | "                 | "                            | N. Y. S. M. | 28             | 176   | 30     | I-13      |
| "                              | 1952a            | "                 | " var. disjunctus Hall.      | " "         | 28,<br>2d ed.  | 177   | 30     | 14, 15    |
| "                              |                  | "                 | "                            | " "         | 28,<br>1st ed. | ....  | 30     | 14, 15    |
| L. H.                          | <u>2576</u><br>1 | Gen. and Sp. Type | elegans.....Hall.            | Pal. N. Y.  | 3              | 304   | 55     | 1a, d     |
| "                              | <u>2576</u><br>2 | "                 | " .....                      | " "         | 3              | 304   | 55     | 1b        |
| "                              | <u>2576</u><br>3 | "                 | " .....                      | " "         | 3              | 304   | 55     | 1c        |
| "                              | 2574             | Type.             | Fitchi .....Hall.            | " "         | 3              | 306   | 67     | 2d, e     |



| LOCALITY.               | REMARKS.                                                                                                                |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Coeyman's, N. Y.        | Somewhat exfoliated individual.                                                                                         |
| .....                   | As <i>Euomphalus hemisphericus</i> Hall.                                                                                |
| Rochester, N. Y.        | Large cast, imbedded.                                                                                                   |
| Lockport, N. Y.         | Ten individuals of various degrees of perfection.                                                                       |
| Rochester, N. Y.        | Large individual, exfoliated.                                                                                           |
| Lockport, N. Y.         | Adult retaining the shell, imbedded.                                                                                    |
| Waldron, Ind.           | Two individuals.                                                                                                        |
| " "                     | Four individuals having the last volution free.                                                                         |
| " "                     | Four adults with whorls in close contact throughout.                                                                    |
| " "                     | Two individuals with free volutions.                                                                                    |
| " "                     | Shows an approach to a columella.                                                                                       |
| New Hartford, N. Y.     | As <i>Platystoma</i> sp. Two internal casts.                                                                            |
| Waldron, Ind.           | Internal cast retaining some shell.                                                                                     |
| Near Clarksville, N. Y. | Internal cast, imbedded.                                                                                                |
| Catskill Creek, N. Y.   | Three internal casts retaining small bits of shell.                                                                     |
| .....                   | See <i>Platystoma niagarens</i> .                                                                                       |
| Bridgeport, Ill.        | A very perfect, nearly entire, external mould.                                                                          |
| Galt, Ont.              | Mould of exterior.                                                                                                      |
| Racine, Wis.            | Int. cast. Two other int. casts and an ext. mould are in type series.                                                   |
| " "                     | Large internal cast showing some external features.                                                                     |
| " "                     | Internal cast with some external markings.                                                                              |
| " "                     | Internal cast partly restored in the figures.                                                                           |
| Nr. Clarksville, N. Y.  | A fragment preserving some shell.                                                                                       |
| Carlisle, N. Y.         | Four internal casts preserving some shell.                                                                              |
| .....                   | See <i>Pleurotomaria occident</i> .                                                                                     |
| Lockport, N. Y.         | Internal cast, nearly entire.                                                                                           |
| Racine, Wis.            | As <i>Pleurotomaria labrosa</i> , var. <i>occidens</i> H. Internal cast. External features taken from another specimen. |
| " "                     | As <i>Pleurotomaria labrosa</i> , var. <i>occidens</i> H. Two exterior moulds used in making the figure.                |
| Lyons, Iowa.            | Very large internal cast retaining some shell.                                                                          |
| Galt, Ont.              | Two casts, weathered and fragmentary.                                                                                   |
| .....                   | See <i>Cyclonema pervetustum</i> .                                                                                      |
| .....                   | " <i>Straparollus solarioides</i> .                                                                                     |
| Galt, Ont.              | Lower part of large internal cast.                                                                                      |
| Racine, Wis.            | Internal cast, imbedded.                                                                                                |
| Galt, Ont.              | As <i>Pleurotomaria solarioides</i> . Two individuals, partly casts.                                                    |
| Waldron, Ind.           | Six individuals.                                                                                                        |
| " "                     | As <i>Strophostylus cyclostomus</i> H.? Nearly entire, well preserved.                                                  |
| Carlisle, N. Y.         | Small individual, imbedded. Enl. prob. made from this specimen.                                                         |
| Schoharie, N. Y.        | Nearly entire adult, imbedded.                                                                                          |
| Near Hudson, N. Y.      | Well preserved adult with lip broken away.                                                                              |
| Carlisle, N. Y.         | Large individual somewhat broken and exfoliated.                                                                        |

Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.              | REFERENCE.  |       |       |       |       |
|---------------|------------------|-------------------|-----------------------------------------|-------------|-------|-------|-------|-------|
|               |                  |                   |                                         | Work.       | Vol.  | P.    | Pl.   | Figs. |
| L. H.         | 2572             | Type.             | <b>Strophostylus</b> Hall— <i>Cont.</i> |             |       |       |       |       |
| "             | 2575             | "                 | globosus .....Hall.                     | Pal. N. Y.  | 3     | 305   | 55    | 8     |
| "             | 2573             | "                 | obtusus .....Hall.                      | " "         | 3     | 305   | 67    | 1a, b |
|               |                  |                   | ? rotundatus.....Hall.                  | " "         | 3     | 307   | 57    | 1c    |
|               |                  |                   | <b>Subulites</b> Conrad.                |             |       |       |       |       |
| Guelph        | <u>2099</u><br>2 | "                 | ventricosus.....Hall.                   | " "         | 2     | 347   | 83    | 7a, b |
| Niag.         | <u>2099</u><br>1 | "                 | " ..... "                               | N. Y. S. M. | 20    | 346   | 15    | 1     |
|               |                  |                   | <b>Tremanotus</b> Hall.                 |             |       |       |       |       |
|               |                  |                   | alpheus .....                           | .....       | ..... | ..... | ..... | ..... |
|               |                  |                   | <b>Trochonema</b> Salter.               |             |       |       |       |       |
| Niag.         | 2078             | Type.             | fatuum .....Hall.                       | N. Y. S. M. | 20    | 345   | 15    | 7, 8  |

Class PTEROPODA.

|       |                  |        |                                 |             |        |       |        |            |
|-------|------------------|--------|---------------------------------|-------------|--------|-------|--------|------------|
|       |                  |        | <b>Conularia</b> Miller.        |             |        |       |        |            |
|       |                  |        | bisculata .....                 | .....       | .....  | ..... | .....  | .....      |
| Niag. | 1804             | Type.  | longa .....Hall.                | Pal. N. Y.  | 2      | 295   | 65     | 2a, b      |
| "     | "                | "      | " .....                         | " "         | 2      | 295   | 65     | 2c, d      |
| "     | <u>1574</u><br>4 | "      | niagarensis.....Hall.           | " "         | 2      | 294   | 65     | 1a-d       |
| "     | <u>1574</u><br>3 | "      | " ..... "                       | Geol. N. Y. | 4th D. | 111   | ct. 40 | 2          |
|       |                  |        | " ..... "                       | Pal. N. Y.  | 2      | 294   | 65     | 1e, f      |
| "     | "                | "      | " ..... "                       | " "         | 2      | 294   | 65     | g, g†      |
| "     | "                | "      | " ..... "                       | " "         | 2      | 294   | 65     | 1h         |
| L. H. | 2589             | "      | pyramidalis .....Hall.          | " "         | 3      | 347   | 72A    | 1b, c      |
|       |                  |        | <b>Tentaculites</b> Schlotheim. |             |        |       |        |            |
|       |                  |        | distans.....                    | .....       | .....  | ..... | .....  | .....      |
| L. H. | <u>2590</u><br>3 | Type.  | elongatus.....Hall.             | Pal. N. Y.  | 3      | 136   | 6      | 16         |
| "     | <u>2590</u><br>1 | "      | " ..... "                       | " "         | 3      | 136   | 6      | 17, 20, 21 |
| "     | <u>2591</u><br>1 | Fig'd. | gyracanthus (Eaton) H.          | " "         | 3      | 137   | 6      | 22, 23     |
|       |                  |        | irregularis.....                | .....       | .....  | ..... | .....  | .....      |
| Cl.   | 1575             | Type.  | minutus.....Hall.               | Pal. N. Y.  | 2      | 183   | A41    | 8b-e       |
| Niag. | 1806             | "      | Niagarensis .....Hall.          | " "         | 2      | 352   | 85     | 11, 12     |

Class CEPHALOPODA.

|        |                  |        |                             |             |               |       |       |           |
|--------|------------------|--------|-----------------------------|-------------|---------------|-------|-------|-----------|
|        |                  |        | <b>Actinoceras</b> Bronn.   |             |               |       |       |           |
| Niag.  | <u>2109</u><br>1 | Type.  | abnorme.....Hall.           | N. Y. S. M. | 20            | 355   | 18    | 10        |
|        |                  |        | " .....                     | " "         | 20,<br>2d ed. | ....  | 25    | 18, sect. |
|        |                  |        | <b>Cyrtoceras</b> Goldfuss. |             |               |       |       |           |
|        |                  |        | amplicorne .....            | .....       | .....         | ..... | ..... | .....     |
| Guelph | 2236             | Type.  | arcticameratum....Hall.     | Pal. N. Y.  | 2             | 349   | 84    | 7a-d      |
| Niag.  | <u>2118</u><br>1 | "      | brevicorne.....Hall.        | N. Y. S. M. | 20            | 356   | 18    | 8, 9      |
| "      | "                | "      | " ..... "                   | " "         | 20,<br>2d ed. | 407   | 25    | 14        |
|        |                  |        | cancellatum.....            | .....       | .....         | ..... | ..... | .....     |
| Niag.  | 2122             | Type.  | dardanus .....Hall.         | Geol. Wis.  | 1861          | 43    |       | .....     |
|        |                  |        | " .....                     | N. Y. S. M. | 20            | 349   | 17    | 3-5       |
| "      | 2123             | "      | Fosteri .....Hall.          | Geol. Wis.  | 1861          | 41    |       |           |
|        |                  |        | " .....                     | N. Y. S. M. | 20            | 349   | 16    | 11, 12    |
| "      | 2124             | Fig'd. | hercules (W.&M.) Hall.      | " "         | 20            | 358   | 17    | 6, 7      |



| LOCALITY.              | REMARKS.                                                                                      |
|------------------------|-----------------------------------------------------------------------------------------------|
| Catskill Creek, N. Y.  | Imperfect internal cast retaining some shell along suture.                                    |
| Helderberg Mts., N. Y. | Nearly entire.                                                                                |
| Near Hudson, N. Y.     | Imperfect internal cast retaining some shell.                                                 |
| Galt, Ont.             | Two internal casts.                                                                           |
| Racine, Wis.           | Large internal cast, nearly entire.                                                           |
| .....                  | See <i>Bucania chicagoensis</i> .                                                             |
| Racine, Wis.           | An internal cast and an external mould of different individuals.                              |
| .....                  | See <i>Conularia niagarensis</i> .                                                            |
| Lockport, N. Y.        | A long, crushed internal cast, imbedded.                                                      |
| “ “                    | Imprint of exterior, fragmentary.                                                             |
| Rochester, N. Y.       | An imbedded fragment, preserving shell and an exterior imprint.                               |
| .....                  | As <i>Conularia quadrisulcata</i> Miller.                                                     |
| Lockport, N. Y.        | A very perfect exterior imprint.                                                              |
| “ “                    | Exterior imprint.                                                                             |
| “ “                    | Large frag. showing inner surf. Two unfig'd frag. are in type series.                         |
| Nr. Clarksville, N. Y. | Two fragments, one showing exterior very perfectly.                                           |
| .....                  | See <i>Cornulites distans</i> .                                                               |
| Helderberg Mts., N. Y. | Individual of medium size.                                                                    |
| Near Schoharie, N. Y.  | Two individuals, one much exfoliated, imbedded.                                               |
| Schoharie, N. Y.       | As the type of <i>Tentaculites irregularis</i> Hall. A slab showing hundreds of individuals.  |
| .....                  | See <i>Tentaculites gyracanthus</i> .                                                         |
| Clinton, N. Y.         | Weathered shale with moulds of several individuals.                                           |
| Lockport, N. Y.        | Individual imbedded with several others.                                                      |
| .....                  | As <i>Orthoceras abnorme</i> Hall.                                                            |
| Racine, Wis.           | “ “ Septate internal cast, showing partial sect.                                              |
| .....                  | See <i>Cyrtoceras hercules</i> .                                                              |
| Galt, Ont.             | Two internal casts, septate. One shows siphon.                                                |
| Racine, Wis.           | Int. cast. Imbedded w. <i>Trochoceras desplainense</i> , pl. 16, figs. 8-10.                  |
| “ “                    | Septate internal cast.                                                                        |
| .....                  | See <i>Cyrtoceras subcancellatum</i> .                                                        |
| Wauwatosa, Wis.        | Two fragmentary internal casts ; one retains some shell. An unfig-ured type is in the series. |
| Bridgeport, Ill.       | Internal cast, imbedded.                                                                      |
| Waukesha, Wis.         | As type of <i>Cyrtoceras</i> ( <i>Phragmoceras</i> ?) <i>amplicorne</i> H., in the text.      |

Class CEPHALOPODA—Continued.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.       | REFERENCE.  |         |       |       |          |
|---------------|----------|-------------------|----------------------------------|-------------|---------|-------|-------|----------|
|               |          |                   |                                  | Work.       | Vol.    | P.    | Pl.   | Figs.    |
| Niag.         | 2119     | Type.             | <b>Cyrtoceras</b> Goldfuss—Cont. |             |         |       |       |          |
| "             | 2120     | "                 | laterale .....Hall.              | N. Y. S. M. | 20      | 357   | 18    | 4-6      |
|               |          |                   | lucillus .....Hall.              | " "         | 20      | 349   | 18    | 7        |
|               |          |                   | orcas .....                      | .....       | .....   | ..... | ..... | .....    |
| Niag.         | 2121     | Type.             | rigidum .....Hall.               | N. Y. S. M. | 20      | 358   | 16    | 3-5      |
| "             | 1831     | "                 | subcancellatum(H.)Miller.        | Am. P. F.   | 1st ed. | 243   |       |          |
|               | 1        |                   | Hall.                            | Pal. N. Y.  | 2       | 290   | 6I    | 2a       |
| "             | 1831     | "                 | " "                              | " "         | 2       | 290   | 6I    | 2b, c    |
| L. H.         | 2597     | "                 | subrectum.....Hall.              | " "         | 3       | 342   | 69    | 3b-d     |
|               |          |                   | <i>Discosorus</i> Hall.          |             |         |       |       |          |
|               |          |                   | conoideus.....                   | .....       | .....   | ..... | ..... | .....    |
|               |          |                   | <b>Gomphoceras</b> Sowerby.      |             |         |       |       |          |
| Cl.           | 1580     | Type.             | conoideum .....Hall.             | Pal. N. Y.  | 2       | 99    | 28    | 13a      |
| Niag.         | 2115     | "                 | " .....                          | L. Sup.     | 2       | 222   | 34    | 2, sect. |
| "             | 2114     | "                 | scrinium .....Hall.              | N. Y. S. M. | 20      | 350   | 18    | 1-3      |
| "             | 1832     | Fig'd.            | sp.....Hall.                     | Pal. N. Y.  | 2       | 290   | 6I    | 1a       |
| "             | "        | "                 | sp.....Hall.                     | " "         | 2       | 290   | 6I    | 1b       |
|               |          |                   | <b>Lituites</b> Montfort.        |             |         |       |       |          |
| Niag.         | 2131     | Type.             | Bickmoreanus...Whitf.            | A. M. N. H. | 1       | 191   | 21    | 1-3      |
| "             | 2130     | "                 | Marshi.....Hall.                 | N. Y. S. M. | 20      | 362   | 16    | 6, 7     |
|               |          |                   | <b>Oncoceras</b> Hall.           |             |         |       |       |          |
| Med.          | 1438     | "                 | gibbosum.....Hall.               | Pal. N. Y.  | 2       | 13    | 4 bis | 6a-c     |
| Niag.         | 2112     | "                 | orcas.....Hall.                  | Geol. Wis.  | 1861    | 42    | ..... | .....    |
|               | 2        |                   | "                                | N. Y. S. M. | 20      | 350   | 17    | 1, 2     |
|               |          |                   | <b>Ormoceras</b> Stokes.         |             |         |       |       |          |
| Cl.           | 1581     | "                 | vertebratum .....Hall.           | Pal. N. Y.  | 2       | 94    | 29    | 1a-g     |
|               |          |                   | <b>Orthoceras</b> Breynius.      |             |         |       |       |          |
|               |          |                   | abnorme.                         | .....       | .....   | ..... | ..... | .....    |
| Cl.           | 1578     | Type.             | abruptum .....Hall.              | Pal. N. Y.  | 2       | 97    | 29    | 4a, b    |
| Niag.         | 2103     | "                 | alienum .....Hall.               | N. Y. S. M. | 20,     | 414   | 24    | 6        |
| "             | 1        |                   |                                  | 2d ed.      |         |       |       |          |
| "             | 2108     | Fig'd.            | angulatum (Wahl.)?H.             | " "         | 20      | 353   | 19    | 9, 10    |
| Cl.           | 1577     | "                 | annulatum (Sow.)?H.              | Pal. N. Y.  | 2       | 96    | 29    | 3, sect. |
| Niag.         | 1808     | "                 | " " " "                          | " "         | 2       | 293   | 64    | 1a, d    |
| "             | 1        | "                 | " " " "                          | " "         | 2       | 293   | 64    | 1b       |
| "             | "        | "                 | " " " "                          | " "         | 2       | 293   | 64    | 1c       |
| "             | 1808     | "                 | " " " "                          | N. Y. S. M. | 20      | 351   | 20    | 4        |
| "             | 5        | "                 | " " " "                          | " "         | 20      | 351   | 20    | 5, 6     |
| "             | 1808     | "                 | " " " "                          | " "         | 20      | 351   | 20    | 5, 6     |
| "             | 6        | "                 | " " " "                          | " "         | 20      | 351   | 20    | 5, 6     |
| "             | 1808     | "                 | " " " "                          | " "         | 20,     | 411   | 24    | 4        |
|               | 4        |                   |                                  | 2d ed.      |         |       |       |          |
|               |          |                   | cancellatum.....                 | .....       | .....   | ..... | ..... | .....    |
| Cl.           | 1616     | Type.             | clavatum .....Hall.              | Pal. N. Y.  | 2       | 104   | 31    | 4a, b    |
|               |          |                   | columnare .....                  | .....       | .....   | ..... | ..... | .....    |
| Niag.         | 2107     | Type.             | crebescens.....Hall.             | N. Y. S. M. | 20      | 354   | 19    | 1-3      |
| "             | 1807     | Fig'd.            | imbricatum (Wahl.)?H.            | Pal. N. Y.  | 2       | 291   | 61    | 4a, c    |
| "             | 1        | "                 | " " ? "                          | " "         | 2       | 291   | 61    | 4b       |
| "             | 1807     | "                 | " " ? "                          | " "         | 2       | 291   | 62    | 1        |
| "             | 2        | "                 | " " ? "                          | " "         | 2       | 291   | 62    | 2        |
| "             | 1807     | "                 | " " ? "                          | " "         | 2       | 291   | 62    | 3        |
| "             | 1        | "                 | " " ? "                          | " "         | 2       | 291   | 62    | 3        |
| " ?           | 2105     | Type.             | loxias.....Hall.                 | N. Y. S. M. | 20      | 380   | 19    | 7        |
| "             | 2102     | "                 | medullare .....Hall.             | Geol. Wis.  | 1860    | 4     |       |          |
|               |          |                   | "                                | N. Y. S. M. | 20      | 353   | 20    | 1, 2     |
| Med.          | 1437     | "                 | multiseptum .....Hall.           | Pal. N. Y.  | 2       | 14    | 4 bis | 8a       |
| "             | "        | "                 | " " " "                          | " "         | 2       | 14    | 4 bis | 8b       |
| Niag.         | 2152     | "                 | niagarenses .....Hall            | N. Y. S. M. | 20      | 356   | 20    | 3        |



| LOCALITY.              | REMARKS.                                                               |
|------------------------|------------------------------------------------------------------------|
| Racine, Wis.           | Internal cast.                                                         |
| Wauwatosa, Wis.        | Fragment from the middle of a large individual.                        |
| .....                  | See <i>Oncoceras orcas</i> .                                           |
| Bridgeport, Ill.       | Internal cast.                                                         |
| Lockport, N. Y.        | As type of <i>Cyrtoceras ? cancellatum</i> H. Name preoccupied.        |
| Niagara Falls, N. Y.   | Very much compressed fragment (outer chamber ?) in shale.              |
| Litchfield, N. Y.      | As <i>Cyrtoceras cancellatum</i> H. Uncompr's'd fragm. from limestone. |
| .....                  | Two internal casts.                                                    |
| .....                  | See <i>Gomphoceras conoideum</i> .                                     |
| .....                  | " " "                                                                  |
| Lockport, N. Y.        | As type of genus <i>Discosorus</i> . Internal cast of siphon.          |
| N. Shore L. Michigan.  | " <i>Discosorus conoideus</i> H. Siphon only, imbedded, shows section. |
| Bridgeport, Ill.       | Chamber of habitation. This is <i>G. Marcyæ</i> of W. & M.             |
| Niagara Falls, N. Y.   | Cast, in limestone.                                                    |
| Lockport, N. Y.        | Much compressed, small individual, in shale.                           |
| Wabash, Ind.           | Large internal cast showing aperture and some external features.       |
| Kankakee, Ia.          | Internal cast of septate portion showing costæ.                        |
| Lockport, N. Y.        | Internal cast of eight chambers and most of outer one.                 |
| .....                  | As <i>Cyrtoceras orcas</i> H.                                          |
| Waukesha, Wis.         | Retains much shell. An unfigured internal cast is in type series.      |
| Reynale's Basin, N. Y. | Five fragmentary internal casts.                                       |
| .....                  | See <i>Actinoceras abnorme</i> .                                       |
| Reynale's Basin, N. Y. | Internal cast.                                                         |
| Racine, Wis.           | " "                                                                    |
| " "                    | Internal cast and a small fragment of exterior imprint.                |
| Wolcott, N. Y.         | Cast showing longitudinal section, imbedded.                           |
| Lockport, N. Y.        | As <i>O. undulatum</i> His. Two compressed fragments in shale.         |
| " "                    | " " " " Uncompressed fragment from limestone.                          |
| " "                    | " " " " A natural external cast in gypsum.                             |
| Waukesha, Wis.         | Internal cast.                                                         |
| Wauwatosa, Wis.        | " "                                                                    |
| Milwaukee, Wis.        | Small fragment showing exterior markings.                              |
| .....                  | See <i>Orthoceras subcancellatum</i> .                                 |
| Mohawk, N. Y.          | Two internal casts.                                                    |
| .....                  | See <i>Orthoceras orus</i> .                                           |
| Racine, Wis.           | Three internal casts.                                                  |
| Lockport, N. Y.        | Two flattened internal casts ; one imbedded.                           |
| Rochester, N. Y.       | A flattened internal cast, imbedded.                                   |
| Lockport, N. Y.        | Much flattened, retains some shell.                                    |
| " "                    | Fragment of shell imbedded so as to show interior.                     |
| " "                    | Internal cast, less compressed than usual.                             |
| N. of Great Lakes.     | " " showing some exterior features ; imbedded.                         |
| Waukesha, Wis.         | " " retaining some shell.                                              |
| Lockport, N. Y.        | " " in block with <i>Orthoceras</i> sp., figs. 7a, b, same plate.      |
| " "                    | " " " " <i>Modiolopsis primigenia</i> , fig. 2b, pl. 14.               |
| Waukesha, Wis.         | " " showing traces of oblique exterior annulation.                     |





| LOCALITY.             | REMARKS.                                                                                   |
|-----------------------|--------------------------------------------------------------------------------------------|
| .....                 | As types of <i>Orthoceras columnare</i> , Hall. Name preoccupied.                          |
| Racine, Wis.          | “ “ “ “ “ Three internal casts.                                                            |
| Arisaig, N. S.        | Internal cast of eight chambers, imbedded.                                                 |
| Waldron, Ind.         | Two internal casts.                                                                        |
| Lockport, N. Y.       | As type of <i>O. cancellatum</i> Hall. Name preoccupied.                                   |
| “ “                   | As preceding. Exterior imprint in pyrite ; small fragment.                                 |
| Clarksville, N. Y.    | Small part of an internal cast, imbedded.                                                  |
| .....                 | See <i>Orthoceras annulatum</i> .                                                          |
| Lockport, N. Y.       | Two small compressed fragments.                                                            |
| Reynale's Basin, N.Y. | Siliceous cast of outer chamber, and one other with chalcedony filling the portion beyond. |
| Lockport, N. Y.       | Internal cast, imbedded with <i>O. multiseptum</i> , fig. 8a, same plate.                  |
| Rochester, N. Y.      | Small part of a cast.                                                                      |
| Wauwatosa, Wis.       | Internal cast.                                                                             |
| Lyons, Iowa.          | “ “ Described in the explanation of the plate.                                             |
| Racine, Wis.          | External cast.                                                                             |
| Bridgeport, Ill.      | Internal cast.                                                                             |
| Racine, Wis.          | Ext. impr. in bl'k w. <i>Cyrtoc. brevicorne</i> . pl. 18, figs. 8, 9, same work.           |
| Waldron, Ind.         | Two external casts.                                                                        |

Class ANNELIDA.

|                       |                                                                                                                       |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| Rochester, N. Y.      | As <i>Scolithus verticalis</i> Hall. Several casts, imbedded.                                                         |
| Lockport, N. Y.       | “ <i>Cornulites</i> sp.? Three individuals, one nearly entire.                                                        |
| “ “                   | “ type of <i>Cornulites flexuosus</i> Hall ; name preoccupied. Three internal casts, one of which retains some shell. |
| .....                 | As <i>Tentaculites distans</i> Hall.                                                                                  |
| .....                 | Referred to the present genus.                                                                                        |
| Flamboro' Head., Ont. | Individual, imbedded. Fig. is an enlargement × 3.                                                                     |
| “ “ “                 | Imbedded with types of <i>Stictopora crassa</i> and <i>S. raripora</i> , vol. 2, pl. 18, figs. 4b-5c.                 |
| “ “ “                 | Without reference to species. Fragment of a large individual.                                                         |
| .....                 | See <i>Cornulites clintoni</i> .                                                                                      |
| Arisaig, N. S.        | Individual lacking part of shell ; imbedded with type of <i>Beyrichia æquilatera</i> , same vol., p. 158, fig. 20.    |
| Waldron, Ind.         | Annular group of small tubes on a young <i>Strophostylus cyclostoma</i> .                                             |
| “ “                   | Two single tubes, larger than the preceding, on gastropods.                                                           |
| “ “                   | Three very large tubes, free.                                                                                         |
| “ “                   | A large tube attached to the calyx of a crinoid.                                                                      |
| “ “                   | Three large tubes cut in longitudinal and transverse section.                                                         |
| .....                 | See <i>Cornulites arcuatus</i> .                                                                                      |
| .....                 | “ “ <i>distans</i> .                                                                                                  |

Subkingdom VERMES—Continued.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.  | REFERENCE.  |       |       |       |        |
|---------------|----------|-------------------|-----------------------------|-------------|-------|-------|-------|--------|
|               |          |                   |                             | Work.       | Vol.  | P.    | Pl.   | Figs.  |
|               |          |                   | <b>Scolithus</b> Haldemann. |             |       |       |       |        |
|               |          |                   | <i>verticalis</i> .....     | .....       | ..... | ..... | ..... | .....  |
| Niag.         | 1958     | Type.             | <b>Spirorbis</b> Lamarck.   |             |       |       |       |        |
|               |          |                   | <i>inornatus</i> .....Hall. | T. A. I.    | 4     | 224   |       |        |
|               |          |                   | " " " "                     | N. Y. S. M. | 28    | 181   | 31    | 14, 15 |
| L. H.         | 2598     | "                 | <i>laxus</i> .....Hall.     | Pal. N. Y.  | 3     | 349   | 54    | 18a-e  |

Subkingdom ARTHROPODA

Class

|       |           |        |                                 |              |       |       |        |              |
|-------|-----------|--------|---------------------------------|--------------|-------|-------|--------|--------------|
| Niag. | 1816<br>1 | Type.  | <b>Æchmina</b> Jones & Holl.    |              |       |       |        |              |
| "     | "         | "      | <i>spinosa</i> .....Hall.       | Pal. N. Y.   | 2     | 317   | 67     | 17, 19       |
| "     | "         | "      | " " " "                         | " "          | 2     | 317   | 67     | 18,20, 21    |
| Cl.   | 1661      | "      | <b>Beyrichia</b> McCoy.         |              |       |       |        |              |
| "     | "         | "      | <i>æquilatera</i> .....Hall.    | Can. N. & G. | 5     | 158   | ....   | 20           |
| Niag. | 1960      | "      | " (Hall) Jones.                 | Q. J. G. S.  | 46    | 18    | 2      | 6, r.v. X 25 |
|       |           |        | <i>granulosa</i> .....Hall.     | N. Y. S. M.  | 28    | 186   | 32     | 4, enl.      |
|       |           |        | <i>lata</i> .....               | .....        | ..... | ..... | .....  | .....        |
|       |           |        | <i>pustulosa</i> .....          | .....        | ..... | ..... | .....  | .....        |
|       |           |        | <i>symmetrica</i> .....         | .....        | ..... | ..... | .....  | .....        |
| Cl.   | 1657      | Type.  | <i>tuberculata</i> Boll.        |              |       |       |        |              |
|       |           |        | <i>var. pustulosa</i> ....Hall. | Can. N. & G. | 5     | 157   | p. 158 | 19           |
|       |           |        | " Jones.                        | Q. J. G. S.  | 46    | 18    | 2      | 1a-c         |
| "     | 1584      | Fig'd. | <b>Bollia</b> Jones & Holl.     |              |       |       |        |              |
|       |           |        | <i>lata</i> (Vanux.)....Hall.   | Pal. N. Y.   | 2     | 301   | A66    | 10a-e        |
| Niag. | 1815      | Type.  | <i>symmetrica</i> .....Hall.    | " "          | 2     | 317   | 67     | 16           |
|       |           |        | <b>Cytherina</b> Lamarck.       |              |       |       |        |              |
|       |           |        | <i>spinosa</i> .....            | .....        | ..... | ..... | .....  | .....        |
| Niag. | 1959      | Type.  | <b>Leperditia</b> Rouault.      |              |       |       |        |              |
| Cl.   | 1656      | "      | <i>faba</i> .....Hall.          | N. Y. S. M.  | 28    | 186   | 32     | 1-3          |
|       |           |        | <i>sinuata</i> .....Hall.       | Can. N. & G. | 5     | 158   |        |              |
|       |           |        | " Jones.                        | Q. J. G. S.  | 46    | 24    | 1      | 12a-c        |

Order PHYLLOCARIDA.

|       |           |       |                                 |             |   |      |    |         |
|-------|-----------|-------|---------------------------------|-------------|---|------|----|---------|
| Wl.   | 2255      | Type. | <b>Ceratiocaris</b> McCoy.      |             |   |      |    |         |
| Niag. | 1818      | "     | <i>acuminata</i> .....Hall.     | Pal. N. Y.  | 3 | 422* | 84 | 6       |
| Wl.   | 2254      | "     | <i>Deweyi</i> .....Hall.        | " "         | 2 | 320  | 71 | 1c, d   |
| "     | "         | "     | <i>Maccoyana</i> .....          | " "         | 3 | 421* | 84 | 1       |
| "     | "         | "     | " " " "                         | " "         | 3 | 421* | 84 | 2       |
| "     | "         | "     | " " " "                         | " "         | 3 | 421* | 84 | 3, 4    |
| "     | "         | "     | " " " "                         | " "         | 3 | 421* | 84 | 5       |
| L. H. | 2621<br>1 | Type. | <i>Monroeii</i> .....Whitfield. | A. M. N. H. | 8 | 301  | 13 | 1       |
|       |           |       |                                 |             |   |      | 14 | 8, enl. |
| "     | "         | "     | " " " "                         | " "         | 8 | 301  | 13 | 2       |
| "     | "         | "     | " " " "                         | " "         | 8 | 301  | 13 | 3       |
| "     | "         | "     | " " " "                         | " "         | 8 | 301  | 13 | 4       |
| "     | "         | "     | " " " "                         | " "         | 8 | 301  | 13 | 5       |
| "     | "         | "     | " " " "                         | " "         | 8 | 301  | 14 | 3, 4    |



Class ANNELIDA—Continued.

| LOCALITY.                         | REMARKS.                                                                                           |
|-----------------------------------|----------------------------------------------------------------------------------------------------|
| .....                             | See <i>Arenicolites verticalis</i> .                                                               |
| Waldron, Ind.<br>Schoharie, N. Y. | Group of three individuals on a <i>Strophonella</i> .<br>A block thickly covered with individuals. |

CRUSTACEA

Order OSTRACODA.

|                                                                   |                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lockport, N. Y.<br>“ “                                            | As <i>Cytherina spinosa</i> H. Two bl'ks covered w. these and other fossils.<br>“ “ “ Two detached valves.                                                                                                                                                                                                      |
| Arisaig, N. S.<br>“ “<br>Waldron, Ind.<br>.....<br>.....<br>..... | Imbedded w. <i>Cornulites flexuosus</i> , var. <i>gracilis</i> , p. 155, same vol.<br>Cast, imbedded. Another unfigured type is in the series.<br>A left valve on a <i>Platystoma</i> .<br>See <i>Bollia lata</i> .<br>“ <i>Beyrichia tuberculata</i> , var. <i>pustulosa</i> .<br>“ <i>Bollia symmetrica</i> . |
| .....<br>Arisaig, N. S.                                           | As <i>Beyrichia pustulosa</i> Hall.<br>Int. cast r. valve, imb. Another spec. is in type series, but not fig'd.                                                                                                                                                                                                 |
| New Hartford, N. Y.<br>Lockport, N. Y.<br>.....                   | As <i>Beyrichia lata</i> Vanux. Many internal and external casts on a<br>block of the grey sandstone.<br>As <i>Beyrichia symmetrica</i> . Two detached valves.<br>See <i>Æchmina spinosa</i> .                                                                                                                  |
| Waldron, Ind.<br>Arisaig, N. S.                                   | Two individuals, entire.<br>Right valve imbedded. Genus queried by Jones.                                                                                                                                                                                                                                       |

|                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Buffalo, N. Y.<br>Lockport, N. Y.<br>Buffalo, N. Y.<br>“ “<br>“ “<br>“ “<br>Waubeka, Wis.<br>“ “<br>“ “<br>“ “<br>“ “<br>“ “ | Imprint of the left valve of a large carapace.<br>As <i>Onchus Deweyi</i> Hall. Last abdominal segment, imbedded.<br>Imperfect imprint retaining some shell.<br>Imprint retaining some shell; in block with <i>Eurypterus lacustris</i> ,<br>fig. 10, pl. 81.<br>Impr. of telson and two body segm. of two indiv. in same block.<br>Imprint.<br>Part of carapace and abdomen with imprint of tail.<br>Imprint of body showing supposed intestinal canal.<br>Part of the abdomen and the imprint of the carapace.<br>Anterior portion of carapace, imbedded.<br>Mandible, imbedded with another.<br>Two pairs of mandibles, imbedded; one of each figured. |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Order PHYLLOCARIDA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.              | REFERENCE.  |      |      |       |         |
|---------------|------------------|--------------------|-----------------------------------------|-------------|------|------|-------|---------|
|               |                  |                    |                                         | Work.       | Vol. | P.   | Pl.   | Figs.   |
| L. H.         | <u>2621</u><br>1 | Type.              | <b>Ceratiocaris</b> McCoy— <i>Cont.</i> |             |      |      |       |         |
| "             | "                | "                  | Monroei . . . . . Whitfield.            | A. M. N. H. | 8    | 301  | 14    | 5       |
| "             | "                | "                  | " . . . . . "                           | " "         | 8    | 301  | 14    | 6, 7    |
| "             | "                | "                  | " . . . . . "                           | " "         | 8    | 301  | ..... | .....   |
| "             | <u>2622</u><br>1 | "                  | poduriformis . . . . . Whitf.           | " "         | 8    | 302  | 14    | 10      |
|               |                  |                    | sp. ? . . . . . Hall.                   | Pal. N. Y.  | 3    | 422* | 84    | 7       |
| Cl.           | 1617             | Fig'd.             | <b>Dithyrocaris</b> Scouler.            |             |      |      |       |         |
|               |                  |                    | sp . . . . . Hall.                      | " "         | 2    | 104  | 31    | 6       |
| L. H.         | <u>2620</u><br>1 | Gen. and Sp. Type. | <b>Entomocaris</b> Whitfield.           |             |      |      |       |         |
| "             | "                | "                  | Telleri . . . . . Whitfield.            | A. M. N. H. | 8    | 300  | 12    | 1       |
| "             | "                | "                  | " ? . . . . . "                         | " "         | 8    | 300  | 12    | 1, 2, 9 |

Order TRILOBITA.

|         |                  |        |                                         |             |         |       |        |             |
|---------|------------------|--------|-----------------------------------------|-------------|---------|-------|--------|-------------|
| Niag.   | 2142             | Type.  | <b>Acidaspis</b> Murchison.             |             |         |       |        |             |
|         |                  |        | Danai . . . . . Hall.                   | Geol. Wis.  | 1862    | 432   | .....  | .....       |
|         |                  |        | "                                       | N. Y. S. M. | 20      | 333   | 21     | 8           |
| L. H.   | 2616             | Fig'd. | hamata ( <i>Con.</i> ) . . . . . Hall.  | Pal. N. Y.  | 3       | 371   | 79     | 15, 18      |
| "       | <u>2615</u><br>1 | "      | tuberculata ( <i>Con.</i> ) . Hall.     | " "         | 3       | 368   | 79     | 2, 5-11, 13 |
| Cl.     | 1598             | "      | sp. indet . . . . . Hall.               | " "         | 2       | 299   | A 66   | 2           |
|         |                  |        | <b>Arges</b> Goldfuss.                  |             |         |       |        |             |
|         |                  |        | phlyctanodes . . . . .                  | .....       | .....   | ..... | .....  | .....       |
|         |                  |        | <b>Asaphus</b> Brongniart.              |             |         |       |        |             |
|         |                  |        | corycaeus . . . . .                     | .....       | .....   | ..... | .....  | .....       |
|         |                  |        | limulurus . . . . .                     | .....       | .....   | ..... | .....  | .....       |
| Niag.   | 2139             | Type.  | <b>Bronteus</b> Goldfuss.               |             |         |       |        |             |
| "       | 1830             | "      | acamas . . . . . Hall.                  | N. Y. S. M. | 20      | 332   | 21     | 19, 20      |
|         |                  |        | ? niagarensis . . . . . Hall.           | Pal. N. Y.  | 2       | 314   | 70     | 3           |
|         |                  |        | <b>Bumastus</b> Murchison.              |             |         |       |        |             |
|         |                  |        | barriensis . . . . .                    | .....       | .....   | ..... | .....  | .....       |
|         |                  |        | <b>Calymene</b> Brongniart.             |             |         |       |        |             |
|         |                  |        | Blumenbachii, Brongn.,                  |             |         |       |        |             |
|         |                  |        | var. niagarensis . . . . .              | .....       | .....   | ..... | .....  | .....       |
| Cl.     | <u>1585</u><br>1 | Fig'd. | do., var. senaria . . . . .             | .....       | .....   | ..... | .....  | .....       |
| "       | <u>1585</u><br>2 | "      | Clintoni ( <i>Vanux.</i> ) . Hall.      | Pal. N. Y.  | 2       | 298   | A 66   | 5a, b       |
| "       | "                | "      | " " " "                                 | " "         | 2       | 298   | A 66   | 5c          |
| Niag.   | <u>1820</u><br>1 | Type.  | niagarensis . . . . . Hall.             | Geol. N. Y. | 4th D.  | 102   | ct. 33 | 3           |
| "       | "                | "      | " " " "                                 | Pal. N. Y.  | 2       | 307   | 67     | 11          |
| "       | "                | "      | " " " "                                 | " "         | 2       | 307   | 67     | 12          |
| "       | <u>1820</u><br>2 | "      | " " " "                                 | N. Y. S. M. | 28      | 187   | 32     | 8, 9        |
| "       | "                | "      | " " " "                                 | " "         | 28      | 187   | 32     | 10-15       |
| Guelph. | 2237             | Fig'd. | " ? . . . . . "                         | Pal. N. Y.  | 2       | 350   | 83     | 8           |
| Cl.     | <u>843</u><br>15 | "      | senaria ( <i>Con.</i> ) . . . . . Hall. | " "         | 2       | 299   | A 66   | 6c, e       |
| "       | "                | "      | " " " "                                 | " "         | 2       | 299   | A 66   | 6d          |
|         |                  |        | sp . . . . .                            | " "         | 2       | 350   | 83     | 8           |
|         |                  |        | <b>Ceraurus</b> Green.                  |             |         |       |        |             |
|         |                  |        | insignis . . . . .                      | .....       | .....   | ..... | .....  | .....       |
| Niag.   | <u>1827</u><br>3 | Type.  | niagarensis . . . . . Hall.             | N. Y. S. M. | 20      | 376   | 21     | 10, 11      |
|         |                  |        | " " " "                                 | " "         | 20      | 335   | .....  | .....       |
| "       | <u>1827</u><br>2 | "      | " " " "                                 | " "         | 28,     | ..... | 32     | 16          |
|         |                  |        | " " " "                                 | " "         | 1st ed. | ..... | 32     | 16          |
|         |                  |        | " " " "                                 | " "         | 28,     | 189   | 32     | 16          |
|         |                  |        | " " " "                                 | " "         | 2d ed.  | ..... | .....  | .....       |



| LOCALITY.              | REMARKS.                                                                         |
|------------------------|----------------------------------------------------------------------------------|
| Waubeka, Wis.          | Imprint of body retaining some test.                                             |
| " "                    | Three blocks with caudal segments and appendages.                                |
| " "                    | Fragment of carapace showing ornamentation.                                      |
| " "                    | Imprint of body and tail.                                                        |
| Buffalo, N. Y.         | Crushed fragment of a large thorax and abdomen.                                  |
| Mohawk, N. Y.          | As an " <i>Ichthyodorulite</i> ". Part of a spine, imbedded.                     |
| Waubeka, Wis.          | Body with imprint of carapace, as described.                                     |
| " "                    | Two mandibles and part of another indiv. supposed to belong here.                |
| .....                  | Catalogue name.                                                                  |
| Bridgeport, Ill.       | Imprint of under side of glabella and part of movable cheeks.                    |
| Helderberg Mts., N. Y. | A small glabella and the occipital spines of a large individual.                 |
| " " "                  | A glab., six sep. mov. ch'ks, a pygid., and a thor. segm.; all imb.              |
| Wolcott, N. Y.         | Part of a small pygidium, imbedded. From the ore bed.                            |
| .....                  | See <i>Lichas phlyctanodes</i> .                                                 |
| .....                  | See <i>Proetus corycæus</i> .                                                    |
| .....                  | " <i>Dalmanites limulurus</i> .                                                  |
| Racine, Wis.           | Imprint of the under side of a glabella and of a pygidium.                       |
| Niagara Falls, Ont.    | " " " " " pygidium.                                                              |
| .....                  | See <i>Illænus barriensis</i> .                                                  |
| .....                  | See <i>Calymene niagarensis</i> .                                                |
| .....                  | " " <i>senaria</i> .                                                             |
| Martville, N. Y.       | Internal cast lacking the free cheeks.                                           |
| New Hartford, N. Y.    | " " of left movable cheek.                                                       |
| Lockport, N. Y.        | As <i>Calymene Blumenbachii</i> , var. <i>niagarensis</i> . Large indiv., imb.   |
| " "                    | " " " " " Group of three indiv.                                                  |
| Waldron, Ind.          | An adult showing hypostoma in place.                                             |
| " "                    | An entire head, and one without the free cheeks.                                 |
| Galt, Ont.             | As <i>Calymene</i> sp.? Imp. of under side glabella and left free cheek.         |
| Reynale's Basin, N. Y. | As <i>Calymene Blumenbachii</i> , var. ? <i>senaria</i> . Two weath'd specimens. |
| Rochester, N. Y.       | " " " " " Small pygidium, imb.                                                   |
| .....                  | See <i>Calymene niagarensis</i> .                                                |
| .....                  | See <i>Ceraurus niagarensis</i> .                                                |
| Milwaukee, Wis.        | As " <i>insignis</i> Beyrich. Int. cast glab. and left fixed cheek.              |
| .....                  | " <i>Sphærexochus Romingeri</i> Hall (?).                                        |
| Waldron, Ind.          | As <i>Ceraurus (Cheirurus) niagarensis</i> H. Large pygidium imbedded.           |

Order TRILOBITA—Continued.

| Geol. Subdiv. | Cat. No.          | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.          | REFERENCE.   |        |       |        |               |
|---------------|-------------------|-------------------|-------------------------------------|--------------|--------|-------|--------|---------------|
|               |                   |                   |                                     | Work.        | Vol.   | P.    | Pl.    | Figs.         |
| Cl. Niag.     | 1597<br>1827<br>1 | Fig'd.            | <b>Ceraurus</b> Green— <i>Cont.</i> |              |        |       |        |               |
|               |                   |                   | niagarensis .....Hall.              | Pal. N. Y.   | 2      | 300   | A 66   | 4             |
|               |                   |                   | “ ..... “                           | “ “          | 2      | 306   | 67     | 9, 10         |
| Niag.         | 1962              | Type.             | <i>Cheirurus</i> Beyrich.           | .....        | .....  | ..... | .....  | .....         |
|               |                   |                   | niagarensis.....                    | .....        | .....  | ..... | .....  | .....         |
|               |                   |                   | <b>Cybele</b> , Lovén.              |              |        |       |        |               |
| “             | “                 | “                 | punctata.....                       | .....        | .....  | ..... | .....  | .....         |
|               |                   |                   | <b>Cyphaspis</b> Burmeister.        |              |        |       |        |               |
|               |                   |                   | Christyi.....Hall.                  | T. A. I.     | 4      | 220   |        |               |
| “             | “                 | “                 | “ ..... “                           | N. Y. S. M.  | 28     | 188   | 32     | 5, enl. × 2   |
|               |                   |                   | “ ..... “                           | “ “          | 28     | 188   | 32     | 6, 7          |
|               |                   | Fig'd.            | Stokesi ( <i>Murch.</i> )..Hall.    | Pal. N. Y.   | 2      | 316   | 67     | 13, 14        |
| Niag.         | 1828              |                   | <i>Dalmania</i> Emmrich.            | .....        | .....  | ..... | .....  | .....         |
|               |                   |                   | bicornis.....                       | .....        | .....  | ..... | .....  | .....         |
|               |                   |                   | Logani.....                         | .....        | .....  | ..... | .....  | .....         |
| “             | “                 | “                 | micrura.....                        | .....        | .....  | ..... | .....  | .....         |
|               |                   |                   | pleuroptyx.....                     | .....        | .....  | ..... | .....  | .....         |
|               |                   |                   | tridens.....                        | .....        | .....  | ..... | .....  | .....         |
| “             | “                 | “                 | verrucosa.....                      | .....        | .....  | ..... | .....  | .....         |
|               |                   |                   | vigilans.....                       | .....        | .....  | ..... | .....  | .....         |
|               |                   |                   | <b>Dalmanites</b> Barrande.         |              |        |       |        |               |
| Niag.         | 1965<br>1823<br>1 | Type.             | bicornis.....Hall.                  | N. Y. S. M.  | 28     | 196   | 33     | 18            |
|               |                   | Fig'd.            | limulurus ( <i>Green</i> )..Hall.   | Geol. N. Y.  | 4th D. | 101   | ct. 33 | 2             |
|               |                   |                   | “ ..... “                           | Pal. N. Y.   | 2      | 303   | 67     | 3             |
| “             | “                 | “                 | “ ..... “                           | “ “          | 2      | 303   | 67     | 2, 2†         |
|               |                   |                   | “ ..... “                           | “ “          | 2      | 303   | 67     | 4             |
|               |                   |                   | “ ..... “                           | “ “          | 2      | 303   | 67     | 5             |
| “             | “                 | “                 | “ ..... “                           | “ “          | 2      | 303   | 67     | 6, 7          |
|               |                   |                   | Logani .....Hall.                   | Can. N. & G. | 5      | 156   | .....  | 18, glab.     |
|               |                   |                   | “ ..... “                           | “ “          | 5      | 156   | .....  | 18, pyg.      |
| L. H.         | 2609<br>2605<br>1 | Fig'd.            | micrura ( <i>Green</i> )...Hall.    | Pal. N. Y.   | 3      | 359   | 74     | 13-15, 18, 20 |
|               |                   |                   | pleuroptyx ( <i>Green</i> ).Hall.   | “ “          | 3      | 356   | 74     | 4             |
|               |                   |                   | “ ..... “                           | “ “          | 3      | 356   | 74     | 6             |
| “             | 2605<br>5         | “                 | “ ..... “                           | “ “          | 3      | 356   | 74     | 9-11          |
|               |                   |                   | “ ..... “                           | “ “          | 3      | 356   | 74     | 9-11          |
|               |                   |                   | tridens.....Hall.                   | “ “          | 3      | 361   | 75     | 4             |
| Niag.         | 2608<br>1963      | Type.             | verrucosus.....Hall.                | T. A. I.     | 4      | 218   | .....  | .....         |
|               |                   |                   | “ ..... “                           | N. Y. S. M.  | 28     | 195   | 33     | 5, 6, 8-11    |
|               |                   |                   | “ ..... “                           | “ “          | 28     | 195   | 33     | 7             |
| “             | “                 | “                 | “ ..... “                           | “ “          | 28     | 195   | 33     | 12            |
|               |                   |                   | “ ..... “                           | “ “          | 28     | 195   | 33     | 13-17         |
|               |                   |                   | “ ..... “                           | “ “          | 28     | 195   | 34     | 13            |
| “             | 1964<br>2         | “                 | vigilans .....Hall.                 | Geol. Wis.   | 1861   | 51    | .....  | 1             |
|               |                   |                   | “ ..... “                           | N. Y. S. M.  | 20     | 335   | .....  | 16            |
|               |                   |                   | “ ..... “                           | “ “          | 20     | 335   | .....  | 2             |
| “             | “                 | “                 | “ ..... “                           | “ “          | 20     | 335   | .....  | 18            |
|               |                   |                   | “ ..... “                           | “ “          | 28     | 193   | 33     | 1             |
|               |                   |                   | “ ..... “                           | “ “          | 28     | 193   | 33     | 2             |
| “             | 1964<br>1         | “                 | “ ..... “                           | “ “          | 28     | 193   | 33     | 3, 4          |
|               |                   |                   | “ ..... “                           | “ “          | 28     | 193   | 33     | 3, 4          |
|               |                   |                   | “ ..... “                           | “ “          | 28     | 193   | 33     | 3, 4          |





Order TRILOBITA—Continued.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.      | REFERENCE.   |        |      |        |             |
|---------------|----------|-------------------|---------------------------------|--------------|--------|------|--------|-------------|
|               |          |                   |                                 | Work.        | Vol.   | P.   | Pl.    | Figs.       |
| Niag. Cl.     | 2143     | Type.             | <b>Encrinurus</b> Emmrich.      |              |        |      |        |             |
|               | 1600     | "                 | nereus.....Hall.                | N. Y. S. M.  | 20     | 375  | 21     | 15          |
|               | 1        | "                 | ornatus.....H. & W.             | Pal. O.      | 2      | 154  |        |             |
|               | 1600     | "                 | " " "                           | Pal. N. Y.   | 2      | 297  | A 66   | 1a          |
|               | 3        | "                 | " " "                           | " "          | 2      | 297  | A 66   | 1b, e, f    |
|               | "        | "                 | " " "                           | " "          | 2      | 297  | A 66   | 1c, d       |
|               | "        | "                 | " " "                           | " "          | 2      | 297  | A 66   | 1g, h, k, l |
|               | "        | "                 | " " "                           | " "          | 2      | 297  | A 66   | 1i          |
|               | "        | "                 | " " "                           | " "          | 2      | 297  | A 66   |             |
|               | "        | "                 | " " "                           | " "          | 2      | 297  | A 66   |             |
| Niag. Cl.     | 1659     | Type.             | <b>Homalonotus</b> König.       |              |        |      |        |             |
|               | 1588     | Fig'd.            | Dawsoni .....Hall.              | Can. N. & G. | 5      | 155  | p. 156 | 17          |
|               | 1        | "                 | delphinocephalus (Grn.)H.       | Pal. N. Y.   | 2      | 299  | A66    | 7           |
|               | 1588     | "                 | " " "                           | " "          | 2      | 309  | 68     | 1, 2, 4, 5  |
|               | 3        | "                 | " " "                           | " "          | 2      | 309  | 68     | 8           |
|               | "        | "                 | " " "                           | " "          | 2      | 309  | 68     | 10, 12      |
|               | 1588     | "                 | " " "                           | " "          | 2      | 309  | 68     | 10, 12      |
|               | 4        | "                 | " " "                           | " "          | 2      | 309  | 68     | 10, 12      |
|               | 2614     | Type.             | Vanuxemi .....Hall.             | N. Y. S. M.  | 28     | 187  | 32     | 17, 18      |
|               | 2        | "                 | " " "                           | Pal. N. Y.   | 3      | 352  | 73     | 9           |
| L. H.         | 2614     | "                 | " " "                           | " "          | 3      | 352  | 73     | 10, 11      |
|               | 1        | "                 | " " "                           | " "          | 3      | 352  | 73     | 10, 11      |
|               | 1961     | "                 | <b>Illænus</b> Dalman.          |              |        |      |        |             |
|               | 2        | "                 | armatus .....Hall.              | N. Y. S. M.  | 20     | 330  | ....   | 3, 4        |
|               | "        | "                 | " " "                           | " "          | 20     | 330  | 22     | 1, 2        |
|               | 1961     | Fig'd.            | " ?.....Hall.                   | " "          | 28     | 189  | 32     | 3           |
|               | 1        | "                 | " " "                           | " "          | 28     | 189  | 32     | 19, 20      |
|               | 2139     | Type.             | barriensis .....Hall.           | " "          | 20     | 377  | 22     | 12          |
|               | 2138     | "                 | cuniculus .....Hall.            | Geol. Wis.   | 1861   | 49   |        |             |
|               | 1        | "                 | imperator.....Hall.             | N. Y. S. M.  | 20     | 332  | 22     | 15          |
| Niag.         | "        | "                 | " " "                           | " "          | 20     | 332  | 22     | 2           |
|               | "        | "                 | " " "                           | " "          | 20     | 332  | 22     | 16          |
|               | "        | "                 | " " "                           | " "          | 20     | 332  | 22     | 17          |
|               | "        | "                 | " " "                           | " "          | 20     | 332  | 22     | 17          |
|               | "        | "                 | " " "                           | " "          | 20     | 332  | 22     | 17          |
|               | 2136     | "                 | insignis .....Hall.             | " "          | 20     | 331  | ....   | 3           |
|               | 3        | "                 | " " "                           | " "          | 20     | 331  | 22     | 15          |
|               | 2136     | "                 | " " "                           | " "          | 20     | 331  | 22     | 2           |
|               | 1        | "                 | " " "                           | " "          | 20     | 331  | 22     | 13          |
|               | 1821     | "                 | ioxus .....Hall.                | " "          | 20     | 378  | 22     | 14          |
| Niag.         | 2        | "                 | " " "                           | " "          | 20     | 378  | 22     | 4, 5        |
|               | 1821     | "                 | " " "                           | " "          | 20     | 332  | ....   | .....       |
|               | 3        | "                 | " " "                           | " "          | 20     | 378  | 22     | 6-8, 10     |
|               | 1821     | "                 | " " "                           | " "          | 20     | 378  | 22     | 9           |
|               | 4        | "                 | " " "                           | " "          | 20     | 378  | 22     | 9           |
|               | "        | "                 | " " "                           | " "          | 20     | 378  | 23     | 1           |
|               | 1821     | "                 | " " "                           | " "          | 20     | 378  | 23     | 1           |
|               | 1        | "                 | " " "                           | Geol. N. Y.  | 4th D. | 102  | ct. 33 | 4           |
|               | "        | "                 | " " "                           | " "          | 4th D. | .... | Tab.   | 2           |
|               | "        | "                 | " " "                           | " "          | 4th D. | .... | 19     | 2           |
| Niag. Cl.     | "        | "                 | " " "                           | Pal. N. Y.   | 2      | 302  | 66     | 1-6         |
|               | "        | "                 | " " "                           | " "          | 2      | 302  | 66     | 9           |
|               | "        | "                 | " " "                           | " "          | 2      | 302  | 66     | 10, 11      |
|               | 1589     | Fig'd.            | " " "                           | " "          | 2      | 299  | A66    | 9a, b       |
|               | 1589     | "                 | " " "                           | " "          | 2      | 299  | A66    | 9c, d       |
|               | 4        | "                 | " " "                           | " "          | 2      | 299  | A66    | 9e-f        |
|               | 1589     | "                 | " " "                           | " "          | 2      | 299  | A66    | 9e-f        |
|               | 2        | "                 | " " "                           | " "          | 2      | 299  | A66    | 9e-f        |
|               | 1821     | "                 | " ?.....Hall.                   | N. Y. S. M.  | 20     | 378  | 22     | 11          |
|               | 2        | "                 | " " "                           | " "          | 20     | 378  | 22     | 11          |
| L. H.         | 2610     | Type.             | <b>Lichas</b> Dalman.           |              |        |      |        |             |
|               | 1        | "                 | Bigsbyi .....Hall.              | Pal. N. Y.   | 3      | 364  | 77     | 4-8         |
|               | 2610     | Fig'd.            | " ? (Hall) H. & C.              | " "          | 7      | 80   | 19A    | 1           |
|               | 2        | "                 | " " "                           | " "          | 7      | 80   | 19A    | 1           |
|               | "        | "                 | " " "                           | " "          | 7      | 80   | 19A    | 1           |
|               | "        | "                 | " " "                           | " "          | 7      | 80   | 19A    | 1           |
|               | "        | "                 | " " "                           | " "          | 7      | 80   | 19A    | 1           |
|               | "        | "                 | " " "                           | " "          | 7      | 80   | 19A    | 1           |
|               | "        | "                 | " " "                           | " "          | 7      | 80   | 19A    | 1           |
|               | "        | "                 | " " "                           | " "          | 7      | 80   | 19A    | 1           |
| Niag.         | 1824     | "                 | <b>Boltoni</b> (Bigsby)...Hall. |              |        |      |        |             |
|               | 1        | "                 | " " "                           | Geol. N. Y.  | 4th D. | .... | Tab.   | 1           |
|               | "        | "                 | " " "                           | " "          | 4th D. | .... | 19     | 1           |
|               | "        | "                 | " " "                           | Pal. N. Y.   | 2      | 311  | 69     | 1           |
|               | "        | "                 | " " "                           | " "          | 2      | 311  | 70     | 1c, d       |
|               | "        | "                 | " " "                           | " "          | 2      | 311  | 70     | 1e, f       |
|               | "        | "                 | " " "                           | " "          | 2      | 311  | 70     | 1e, f       |
|               | "        | "                 | " " "                           | " "          | 2      | 311  | 70     | 1e, f       |
|               | "        | "                 | " " "                           | " "          | 2      | 311  | 70     | 1e, f       |
|               | "        | "                 | " " "                           | " "          | 2      | 311  | 70     | 1e, f       |



| LOCALITY.              | REMARKS.                                                                     |
|------------------------|------------------------------------------------------------------------------|
| Racine, Wis.           | Imprint of upper side of pygidium.                                           |
| Reynale's Basin, N. Y. | As <i>Cybele punctata</i> Brunn. Nearly entire individual, imbedded.         |
| Medina, N. Y.          | " " " " Silicified glab. and left fixed cheek.                               |
| " "                    | " " " " " " and a movable cheek,                                             |
| " "                    | imbedded together.                                                           |
| " "                    | As <i>Cybele punctata</i> Brunn. Two silicified pygidia, imbedded.           |
| Oneida Co., N. Y.      | " " " " Silicified pygidium, imbedded.                                       |
| Arisaig, N. S.         | Internal cast pygidium, imbedded with <i>Delmanites Logani</i> , fig. 18,    |
| New Hartford, N. Y.    | same page. Other fragmentary casts are in the type series.                   |
| Lockport, N. Y.        | Internal cast, imbedded.                                                     |
| " "                    | Four individuals retaining more or less test.                                |
| " "                    | Pygidium, imbedded.                                                          |
| " "                    | Large, exfol. indiv. with glabella broken away, showing hypostoma.           |
| Waldron, Ind.          | An imperfect head shield and a pygidium, imbedded.                           |
| Schoharie, N. Y.       | Part of a crushed thorax ; more than is represented in figure.               |
| Helderberg Mts., N. Y. | Small pygidium, imbedded.                                                    |
| Bridgeport, Ill.       | Imprint of under side of cephalon.                                           |
| " "                    | Imprint of pygidium and last thoracic segment.                               |
| Waldron, Ind.          | A glabella and a pygidium, imbedded.                                         |
| .....                  | See <i>Illænus ioxus</i> .                                                   |
| Wauwatosa, Wis.        | Imprint of the under side of a glabella.                                     |
| .....                  | Figure is one-half natural size.                                             |
| Near Burlington, Wis.  | Imprint of the under side of a very large glabella.                          |
| " " " " " "            | " " " " " " small pygidium.                                                  |
| .....                  | Figure is one-half natural size.                                             |
| Near Burlington, Wis.  | Pygidium and parts of four thoracic segments.                                |
| Bridgeport, Ill.       | Imprint of the under side of glabella and fixed cheeks.                      |
| Milwaukee, Wis.        | " " " " pygidium.                                                            |
| Racine, Wis.           | As <i>Illænus barriensis</i> Murch. Cast of small head.                      |
| Waukesha, Wis.         | Cast of a head and of a pygidium.                                            |
| Wauwatosa, Wis.        | Imprint of the under side of a large free cheek.                             |
| " "                    | Cast of a very large glabella.                                               |
| Lockport, N. Y.        | As <i>Bumastus barriensis</i> Murch. Exfoliated individual, imbedded.        |
| " "                    | " " " " Entire, imbedded.                                                    |
| " "                    | " " " " Six individuals, imbedded separately.                                |
| " "                    | " " " " Imp. of under side of head retaining some crust.                     |
| " "                    | " " " " Part of cheek and eye, imbedded.                                     |
| Rochester, N. Y.       | " " " " Most of a large glabella, imbedded.                                  |
| Medina, N. Y.          | " " " " Interior imprint large pygidium.                                     |
| Rochester, N. Y.       | " " " " Mass of head and tail shields.                                       |
| Racine, Wis.           | " <i>Illænus barriensis</i> Murch. Cast of very small glabella.              |
| Helderberg Mts., N. Y. | Two glabellas, a hypostoma, and half a pygidium, imbedded.                   |
| Schoharie, N. Y.       | A very large pygidium, imb. so as to show int. This and the pre-             |
| .....                  | ceding are referred to the subgenus <i>Conolichas</i> in Pal. N. Y., vol. 7. |
| .....                  | As <i>Platynotus Boltoni</i> Bigsby.                                         |
| Lockport, N. Y.        | Imprint under side large individual retaining some test.                     |
| " "                    | " " anterior $\frac{2}{3}$ of indiv., showing impr. und. side of hypostoma.  |
| " "                    | Part of a glabella, and the imprint of the under side of another.            |

Order TRILOBITA—Continued.

| Geol. Subdiv. | Cat. No.          | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                        | REFERENCE.                |                         |              |             |               |
|---------------|-------------------|-------------------|-----------------------------------------------------------------------------------|---------------------------|-------------------------|--------------|-------------|---------------|
|               |                   |                   |                                                                                   | Work.                     | Vol.                    | P.           | Pl.         | Figs.         |
| Niag.         | $\frac{1824}{1}$  | Fig'd.            | <b>Lichas</b> Dalman— <i>Cont.</i><br>Boltoni ( <i>Bigsby</i> )... <i>Hall.</i>   | Pal. N. Y.                | 2                       | 311          | 70          | 1g, gt.       |
| Niag.         | $\frac{1824a}{2}$ | Type.             | Boltoni <i>Bigsby</i> ,<br><i>var. occidentalis</i> .. <i>H.</i>                  | T. A. I.<br>N. Y. S. M.   | 4<br>28                 | 223<br>198   | 34          | 8-10          |
| "             | "                 | "                 | " " " "                                                                           | " "                       | 28                      | 198          | 34          | 11            |
| "             | 1966              | "                 | breviceps ..... <i>Hall.</i>                                                      | T. A. I.<br>N. Y. S. M.   | 4<br>28                 | 222<br>197   | 34          | 1-3           |
| "             | "                 | "                 | " ..... "                                                                         | " "                       | 28                      | 197          | 34          | 4             |
| "             | "                 | "                 | " ..... "                                                                         | " "                       | 28                      | 197          | 34          | 5, 6          |
| "             | "                 | "                 | " ..... "                                                                         | " "                       | 28                      | 197          | 34          | 7             |
| Niag.         | $\frac{2153}{1}$  | Type.             | <i>breviceps</i> .....<br>emarginatus ..... <i>Hall.</i>                          | " "                       | 20<br>28                | .....<br>199 | 21          | 12, 14        |
| "             | $\frac{2153}{2}$  | "                 | " ..... "                                                                         | " "                       | 20                      | 334 &<br>377 | 21          | 12, 14        |
| "             | 1825              | "                 | nereus ..... <i>Hall.</i>                                                         | " "                       | 16                      | 226          | 21          | 13            |
| "             | "                 | "                 | " ..... "                                                                         | Pal. N. Y.                | 2                       | 311          | 70          | 1h            |
| "             | "                 | "                 | " ..... "                                                                         | " "                       | 2                       | 311          | 70          | 1i            |
| "             | 2154              | "                 | obvius ..... "                                                                    | N. Y. S. M.               | <sup>20</sup><br>2d ed. | 424          | 25          | 19            |
| "             | 1826              | Fig'd.            | phlyctanodes ( <i>Green</i> ). <i>H.</i>                                          | Pal. N. Y.                | 2                       | 314          | 70          | 2a-c          |
| "             | 1967              | "                 | sp. ?..... <i>Hall.</i>                                                           | N. Y. S. M.               | 28                      | 198          | 34          | 12            |
| L. H.         | 2613              | Type.             | <b>Phacops</b> Emmrich.<br>hudsonica ..... <i>Hall.</i>                           | Pal. N. Y.                | 3                       | 355          | 73          | 26-28         |
| "             | $\frac{2612}{1}$  | Type.             | <i>limulurus</i> .....<br>Logani..... <i>Hall.</i>                                | Pal. N. Y.                | 3                       | 353          | 73          | 16-19, 25     |
| Cl.           | 1594              | "                 | trisulcata ..... <i>Hall.</i>                                                     | " "                       | 2                       | 300          | A66         | 3a, b         |
|               |                   |                   | <i>Platynotus</i> Conrad.<br><i>Boltoni</i> .....<br>.....                        | .....                     | .....                   | .....        | .....       | .....         |
| Niag.         | 1829              | Type.             | <b>Proetus</b> Steininger.<br>corycæus..... <i>Conrad.</i>                        | J. A. N. S.               | 8                       | 277          | 16          | 15            |
|               |                   |                   | ..... <i>Hall.</i>                                                                | Geol. N. Y.               | 4th D.                  | .....        | Tab.<br>19  | 3             |
|               |                   |                   | "                                                                                 | Pal. N. Y.                | 2                       | 315          | 67          | 15            |
| L. H.         | 2617              | "                 | protuberans..... <i>Hall.</i>                                                     | " "                       | 3                       | 351          | 73          | 6-7a          |
|               |                   |                   | <i>Stokesi</i> .....<br>.....                                                     | .....                     | .....                   | .....        | .....       | .....         |
| Niag.         | $\frac{2141}{1}$  | Type.             | <b>Sphærexochus</b> Beyrich.<br><i>mirus</i> .....<br>Romingeri..... <i>Hall.</i> | Geol. Wis.<br>N. Y. S. M. | 1<br>20                 | 434<br>375   | .....<br>21 | .....<br>4, 5 |
| "             | $\frac{2141}{2}$  | "                 | " ..... "                                                                         | " "                       | 20                      | 334          | .....       | .....         |
| "             | "                 | "                 | " ..... "                                                                         | " "                       | 20                      | 375          | 21          | 6             |

Order EURYPTERIDA.

|     |                  |                    |                                                               |            |   |      |                  |              |
|-----|------------------|--------------------|---------------------------------------------------------------|------------|---|------|------------------|--------------|
| Wl. | $\frac{2250}{1}$ | Gen. and Sp. Type. | <b>Dolichopterus</b> Hall.<br>macrocheirus ..... <i>Hall.</i> | Pal. N. Y. | 3 | 414* | 80A              | 15           |
| "   | "                | "                  | " ..... "                                                     | " "        | 3 | 414* | 80A<br>83<br>83A | 17<br>1<br>1 |



| LOCALITY.              | REMARKS.                                                                                                              |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Lockport, N. Y.        | Imp. under side of the pygidium referred to this fig. by Prof. Hall.<br>See also <i>Lichas nereus</i> .               |
| Waldron, Ind.          | Two pygidia showing inner surface, and an imperfect one showing upper surface, imbedded.                              |
| “ “                    | An imbedded hypostoma.                                                                                                |
| “ “                    | Glabella and a right free cheek, imbedded.                                                                            |
| “ “                    | Pygidium and part of thorax, imbedded.                                                                                |
| “ “                    | Two pygidia, one showing the under and the other the upper side.                                                      |
| “ “                    | Central part of a large cephalon.                                                                                     |
| .....                  | See <i>Lichas emarginatus</i> .                                                                                       |
| Bridgeport, Ill.       | As <i>Lichas breviceps</i> ? Imprints of cephalon and pygidium in same block. Probably = <i>L. nereus</i> .           |
| Grafton, Ill.          | As <i>Lichas breviceps</i> ? Exterior impr. pygidium. Prob. = <i>L. nereus</i> .                                      |
| Lockport, N. Y.        | As <i>Lichas Boltoni</i> Bigsby. Imprint of the under side of a pygidium.                                             |
| “ “                    | “ “ “ “ Cast of indiv. with some test, imb. A smaller individual without head is in the type series, but not figured. |
| Lyons, Ia.             | Imprint of the under side of a cephalon.                                                                              |
| Albion, N. Y.          | As <i>Arges phlyctanodes</i> Grn. Glabella and fixed cheeks, imbedded.                                                |
| Waldron, Ind.          | Anterior extension of a head, imbedded.                                                                               |
| Near Hudson, N. Y.     | A very perfect head, imbedded.                                                                                        |
| .....                  | See <i>Dalmanites limulurus</i> .                                                                                     |
| Helderberg Mts., N. Y. | Two heads, an exfoliated rolled individual, and a hypostoma.                                                          |
| Rochester, N. Y.       | Interior cast of a small individual.                                                                                  |
| .....                  | Synonym of <i>Lichas</i> .                                                                                            |
| .....                  | See <i>Lichas Boltoni</i> .                                                                                           |
| .....                  | As <i>Asaphus corycaeus</i> Conrad.                                                                                   |
| .....                  | “ “ “ “                                                                                                               |
| Lockport, N. Y.        | An imbedded individual with the counterpart imprint.                                                                  |
| Schoharie, N. Y.       | Head with part of thorax, and a small pygidium, imb., exfoliated.                                                     |
| .....                  | See <i>Cyphaspis Stokesi</i> .                                                                                        |
| .....                  | “ <i>Sphaerexochus Romingeri</i> .                                                                                    |
| .....                  | Name proposed, if <i>Sphaerexochus mirus</i> should be found inapplicable.                                            |
| Wauwatosa, Wis.        | As <i>Sphaerexochus mirus</i> Beyrich. Imp. of the under side of a glab.                                              |
| Racine, Wis.           | Impr. under side of a small head. See also <i>Ceraurus niagarensis</i> .                                              |
| .....                  | Defined as a subgenus of <i>Eurypterus</i> .                                                                          |
| Buffalo, N. Y.         | Anterior half of a metastoma.                                                                                         |
| “ “                    | A very large individual split so as to show both sides.                                                               |

Order EURYPTERIDA—Continued.

| Geol. Subdiv.              | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                           | REFERENCE. |      |      |     |          |
|----------------------------|------------------|-------------------|----------------------------------------------------------------------|------------|------|------|-----|----------|
|                            |                  |                   |                                                                      | Work.      | Vol. | P.   | Pl. | Figs.    |
| Wl.                        | <u>2245</u><br>1 | Fig'd.            | <b>Eurypterus</b> DeKay.<br>locustris ( <i>Harlan</i> )... <i>H.</i> | Pal. N. Y. | 3    | 407* | 8I  | I        |
| "                          | "                | "                 | " " " " " "                                                          | " "        | 3    | 407* | 8I  | 2        |
| "                          | "                | "                 | " " " " " "                                                          | " "        | 3    | 407* | 8I  | 3        |
| "                          | "                | "                 | " " " " " "                                                          | " "        | 3    | 407* | 8I  | 4, 9     |
| "                          | "                | "                 | " " " " " "                                                          | " "        | 3    | 407* | 8I  | 5        |
| "                          | "                | "                 | " " " " " "                                                          | " "        | 3    | 407* | 8I  | 6        |
| "                          | "                | "                 | " " " " " "                                                          | " "        | 3    | 407* | 8I  | 7        |
| "                          | "                | "                 | " " " " " "                                                          | " "        | 3    | 407* | 8I  | 8, II    |
| "                          | "                | "                 | " " " " " "                                                          | " "        | 3    | 407* | 8I  | IO       |
| "                          | "                | "                 | " " " " " "                                                          | " "        | 3    | 407* | 8IA | I        |
| "                          | "                | "                 | " " " " " "                                                          | " "        | 3    | 407* | 8IB | 2, 3     |
| "                          | "                | "                 | " " " " " "                                                          | " "        | 3    | 407* | 83b | 3        |
| "                          | 2246             | Type.             | " var. robustus <i>Hall.</i>                                         | " "        | 3    | 410* | 80A | I4       |
| "                          | 2247             | "                 | microphthalmus... <i>Hall.</i>                                       | " "        | 3    | 407* | 8IC | I        |
| "                          | 2248             | "                 | pachycheirus..... <i>Hall.</i>                                       | " "        | 3    | 412* | 80A | 7        |
| "                          | 2249             | "                 | pustulosus..... <i>Hall.</i>                                         | " "        | 3    | 413* | 82  | 2-2e     |
| "                          | <u>2244</u><br>1 | Fig'd.            | remipes ( <i>DeKay</i> ).... <i>H.</i>                               | " "        | 3    | 413* | 83b | I        |
| "                          | <u>2244</u><br>2 | "                 | " " " " " "                                                          | " "        | 3    | 404* | 80  | I, 4     |
| "                          | <u>2244</u><br>1 | "                 | " " " " " "                                                          | " "        | 3    | 404* | 80  | 2        |
| "                          | "                | "                 | " " " " " "                                                          | " "        | 3    | 404* | 80  | 8, IO-12 |
| "                          | "                | "                 | " " " " " "                                                          | " "        | 3    | 404* | 80A | 5, 6     |
| "                          | "                | "                 | " " " " " "                                                          | " "        | 3    | 404* | 80A | II       |
| <b>Pterygotus</b> Agassiz. |                  |                   |                                                                      |            |      |      |     |          |
| "                          | <u>2251</u><br>1 | Type.             | Cobbi..... <i>Hall.</i>                                              | " "        | 3    | 417* | 83B | 4        |
| "                          | "                | Fig'd.            | " ?..... " "                                                         | " "        | 3    | 417* | 84  | 8        |
| "                          | <u>2253</u><br>1 | Type.             | Osborni..... <i>Hall.</i>                                            | " "        | 3    | 419* | 80A | 9, I6    |

Class ARACHNIDA.

|     |      |                    |                                                                 |             |   |     |          |             |
|-----|------|--------------------|-----------------------------------------------------------------|-------------|---|-----|----------|-------------|
| Wl. | 2257 | Gen. and Sp. Type. | <b>Proscorpius</b> Whitfield.<br>Osborni..... <i>Whitfield.</i> | A. M. N. H. | I | I84 | I9<br>20 | I, 2<br>I-4 |
|-----|------|--------------------|-----------------------------------------------------------------|-------------|---|-----|----------|-------------|

Subkingdom VERTEBRATA.

|  |  |                                               |       |       |       |       |       |       |
|--|--|-----------------------------------------------|-------|-------|-------|-------|-------|-------|
|  |  | <i>Ichthyodorulite</i> .....                  | ..... | ..... | ..... | ..... | ..... | ..... |
|  |  | <b>Onchus</b> Agassiz.<br><i>Deweyi</i> ..... | ..... | ..... | ..... | ..... | ..... | ..... |



| LOCALITY.           | REMARKS.                                                                        |
|---------------------|---------------------------------------------------------------------------------|
| Buffalo, N. Y.      | Young individual showing upper surface.                                         |
| " "                 | Individual as described in explanation of plate.                                |
| " "                 | Carapace and first abdominal segment.                                           |
| " "                 | A thoracic segment and last two segments with spine, imb. together.             |
| " "                 | Large caudal spine.                                                             |
| " "                 | Thorax imbedded so as to show ventral side.                                     |
| " "                 | Anterior ventral segment and left swimming foot, imbedded.                      |
| " "                 | Very large anterior segment with appendage, imbedded.                           |
| " "                 | Half of a body segm. in bl'k w. <i>Ceratiocaris Maccoyana</i> , fig. 2, pl. 84. |
| " "                 | Exterior imprint large individual with dismembered swimming foot.               |
| " "                 | Two segments of swimming foot, imbedded separately.                             |
| " "                 | Very large carapace and first segment, imbedded.                                |
| Near Buffalo, N. Y. | Very large, imbedded. As a distinct species in expl. of plates.                 |
| Litchfield, N. Y.   | Carapace and part of first segment, imbedded. Boulder.                          |
| Near Buffalo, N. Y. | Detached swimming feet and first ventral segment, imb. together.                |
| Buffalo, N. Y.      | Most of a large carapace with part of first segment, imbedded.                  |
| Waterville, N. Y.   | A very small individual and an adult, imbedded.                                 |
| Litchfield, N. Y.   | A very perfect young individual showing ventral side.                           |
| Waterville, N. Y.   | Four specimens fully described in the explanation of the plate.                 |
| " "                 | A body segment and an undetermined part, imbedded together.                     |
| " "                 | Small carapace with first segment, dorsal side.                                 |
|                     |                                                                                 |
| Buffalo, N. Y.      | Large free ramus of a chelate appendage.                                        |
| " "                 | Part of a large abdominal segment.                                              |
| Waterville, N. Y.   | Anterior half showing ventral side.                                             |
|                     |                                                                                 |
|                     |                                                                                 |
| Waterville, N. Y.   | Individual, imbedded.                                                           |
|                     |                                                                                 |
| Class PISCES.       |                                                                                 |
| .....               | See <i>Dithyrocaris</i> sp.                                                     |
| .....               | See <i>Ceratiocaris Deweyi</i> .                                                |

## ADDENDA.

Pages 40 and 41.

**Strophomena** planumbona *Hall*, as *Leptaena filitexta* Hall, Pal. N. Y., Vol. 1, p. 111, pl. 31 B, figs. 3 d-f. Oxford? Ohio. Hudson River Group. Cat. No.  $\frac{918}{5}$ . Type. The figure seems to have been made from this specimen, which is entire.

Pages 36 and 37.

**Plectorthis** Jamesi *Hall*, as *Orthis Jamesi* Hall, N. Y. S. M., Rept. 14, p. 89, and (Whitfield) Pal. O., Vol. 2, p. 77, pl. 1, figs. 21, 22. Cincinnati, Ohio. Hudson River Group. Cat. No. 4489. Type. A very perfect, entire individual. Ten others are in the original type series.

Page 78.

**Dictyonema** gracile *Hall*, add to the first entry under the species, Can. O. R., Dec. 2, p. 29, pl. B, fig. 5, and N. Y. S. M., Rept. 20, p. 178, pl. 1, fig. 5.

Pages 80 and 81.

**Groptolithus** clintonensis *Hall*, Can. O. R., Dec. 2, p. 25, pl. B, figs. 1-4, and N. Y. S. M., Rept. 20, p. 193, pl. 1, figs. 1-4. Rochester, N. Y. Clinton Group. Cat. No.  $\frac{1465}{2}$ . Type. Two fragments, imbedded together.

Pages 112 and 113.

**Amphistrophia** corrugata Conrad, as *Leptaena corrugata* (Con.) Hall. Pal. N. Y., Vol. 2, p. 59, pl. 21, fig. 2 a. Sodus, N. Y. Clinton Group. Cat. No.  $\frac{1516}{1}$ . Fig'd sp. A very small, imperfect individual, imbedded with a specimen used in making figure 2 d on the same plate.

Page 157.

### **Cuneamya alveata**, sp. nov.

Shell nearly three fourths of an inch long, with rather tumid beaks one fifth of the shell's length from the anterior end, which is rounded and has had a deep lunule; hinge, behind the beaks, straight, parallel to the base. A scarcely visible constriction crosses the valves from the beaks almost direct. Surface marked by strong concentric undulations, which are nearly obsolete on the posterior cardinal area. Undulations marked by radiating lines reminding one of those of the genus *Cypricardinia* Hall. Niagara group. Wolcott, N. Y. Proposed for *Orthonata curta*? Hall, Pal. N. Y., Vol. 2, p. 285, pl. 59, fig. 8, which is nat. size, but does not show the plain cardinal area or cuneate posterior extremity, or the true direction of the surface undulations.

Pages 174 and 175.

**Cornulites** proprius *Hall*. The figures on pl. 31 of the 28th Rept. N. Y. S. M. were repeated on pl. 116 of the supplement to Pal. N. Y., Vol. 5, pt. 2, which was issued with Vol. 7.

## CORRIGENDUM.

P. 119, line 15. Instead of "*Atrypa aequiradiata*" read "*Atrypa bidens*."



CATALOGUE OF THE TYPES AND FIGURED SPECIMENS  
IN THE PALÆONTOLOGICAL COLLECTION OF  
THE GEOLOGICAL DEPARTMENT, AMERICAN  
MUSEUM OF NATURAL HISTORY.

*Part III, Beginning with the Oriskany Sandstone.*

Devonian.

Kingdom PLANTÆ.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                | REFERENCE.   |        |       |        |         |
|---------------|------------------|-------------------|-----------------------------------------------------------|--------------|--------|-------|--------|---------|
|               |                  |                   |                                                           | Work.        | Vol.   | P.    | Pl.    | Figs.   |
| Chem.         | $\frac{4428}{1}$ | Type.             | <b>Archæopteris</b> Dawson.<br>laxa .....Hall.            | Geol. N. Y.  | 4th D. | 275   | ct.127 | I       |
|               |                  |                   | <b>Cyclopteris</b> Brongniart.<br>Hallana .....           | .....        | .....  | ..... | .....  | .....   |
| Ham.          | $\frac{4429}{1}$ | Type.             | <b>Dadoxylon</b> Endlich.<br>Halli .....Dawson.           | Q. J. G. S.  | 18     | 306   | 13     | II      |
| "             | $\frac{4357}{1}$ | "                 | <b>Didymophyllum</b> Göppert.<br>reniforme .....Dawson.   | " "          | 18     | 309   | 13     | 15a, b  |
|               |                  |                   | " "                                                       | Foss. Pl.    | .....  | 23    | 3      | 35, 35a |
| Chem.         | $\frac{4430}{1}$ | Type.             | <b>Filicites</b> Schlotheim.<br>sp .....                  | Geol. N. Y.  | 4th D. | 273   | ct.125 | .....   |
|               |                  |                   | <b>Lepidodendron</b> Sternberg.<br>chemungense .....Hall. | " "          | 4th D. | 274   | ct.127 | 2       |
| Ham.          | $\frac{4307}{2}$ | "                 | "<br>gaspianum.....Dawson.                                | N. Y. S. M.  | 16     | 113   | .....  | 6       |
|               |                  |                   | "<br>" ..... "                                            | Q. J. G. S.  | 18     | 312   | 14     | 27      |
| Ham.          | $\frac{4304}{1}$ | Gen. and Sp.Type. | <b>Leptophlœum</b> Dawson.<br>rhombicum.....Dawson.       | Foss. Pl.    | .....  | 33    | 8      | 82      |
|               |                  |                   | " ..... "                                                 | Q. J. G. S.  | 18     | 316   | 12     | 8       |
| "             | "                | "                 | " ..... "                                                 | " "          | 18     | 316   | 17     | 53      |
|               |                  |                   | <b>Lycopodites</b> Brongniart.<br>Vanuxemi .....          | .....        | .....  | ..... | .....  | .....   |
| Chem.         | $\frac{4431}{1}$ | Gen. and Sp.Type. | <b>Sigillaria</b> Bronguiart.<br>chemungensis.....        | .....        | .....  | ..... | .....  | .....   |
|               |                  |                   | <b>Plumalina</b> Hall.<br>plumaria .....Hall.             | Can. N. & G. | 3      | 175   | .....  | .....   |
| Ham.          | $\frac{4530}{1}$ | Type.             | "<br>Dawson.                                              | Geol. N. Y.  | 4th D. | 273   | ct.125 | .....   |
|               |                  |                   | Hall.<br>N. Y. S. M.                                      | Q. J. G. S.  | 18     | 314   | .....  | .....   |
| Ham.          | $\frac{4329}{1}$ | "                 | <b>Rachiopteris</b> Dawson.<br>punctata .....Dawson.      | N. Y. S. M.  | 16     | 115   | .....  | 7       |
|               |                  |                   | <b>Sphenopteris</b> Brongniart.<br>Hitchcockana...Dawson. | Q. J. G. S.  | 18     | 323   | 16     | 61      |
| Chem.         | $\frac{4432}{1}$ | Type.             | <b>Spirophyton</b> Hall.<br>crassum.....Hall.             | Q. J. G. S.  | 18     | 321   | 16     | 51      |
|               |                  |                   | <b>Stigmaria</b> Brongniart.<br>exigua .....Dawson.       | .....        | .....  | ..... | .....  | .....   |
| "             | $\frac{4433}{1}$ | "                 | "                                                         | .....        | .....  | ..... | .....  | .....   |

Kingdom ANIMALIA.

Subkingdom

|       |                  |                   |                                                          |             |       |       |       |       |
|-------|------------------|-------------------|----------------------------------------------------------|-------------|-------|-------|-------|-------|
| Chem. | $\frac{4434}{1}$ | Gen. and Sp.Type. | <b>Ceratodictya</b> H. & C.<br>annulata .....Hall.       | N. Y. S. M. | 16    | 90    | 3     | 3     |
|       |                  |                   | "<br>H. & C.                                             | Pal. Sp.    | ..... | 120   | 22    | 5, 6  |
| Chem. | $\frac{4435}{1}$ | Type.             | <b>Clathrosporgia</b> Hall.<br>fenestrata (Hall) H. & C. | Pal. Sp.    | ..... | 122   | 25    | 13    |
|       |                  |                   | <b>Coscinopora</b> Goldfuss.<br>macropora Eaton.....     | .....       | ..... | ..... | ..... | ..... |

NOTE.—General remarks and the explanation of abbreviations used in this part of the Catalogue, but not in the preceding parts, will be found on the pages immediately following the tabulated matter.



Subkingdom CRYPTOGRAMIA.

| LOCALITY.                     | REMARKS.                                                                                                                                         |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Pine Valley, N. Y.            | As <i>Sphenopteris laxa</i> . Was made the type of <i>Cyclopteris Hallana</i> by Gœppert, Die fossil Flora des Uebergangsgebirges, 1852, p. 145. |
| .....                         | See <i>Archæopteris laxa</i> .                                                                                                                   |
| Ontario Co., N. Y.            | A rather small, silicified fragment from Hemlock Creek.                                                                                          |
| Near Skaneateles L.,<br>N. Y. | Fragment of a stem, imbedded.                                                                                                                    |
| .....                         | See <i>Plumalina plumaria</i> .                                                                                                                  |
| .....                         | As <i>Sigillaria chemungensis</i> .                                                                                                              |
| Near Elmira, N. Y.            | A cast in sandy shale. Figures are one-half natural size.                                                                                        |
| Summit, N. Y.                 | Imbedded fragment.                                                                                                                               |
| “ “                           | Cast in sandstone, imbedded.                                                                                                                     |
| Perry, Me.                    | Imprint.                                                                                                                                         |
| “ “                           | Counterpart of type, which was destroyed at Portland (Me.) fire.                                                                                 |
| .....                         | See <i>Plumalina flumaria</i> .                                                                                                                  |
| .....                         | See <i>Lepidodendron chemungense</i> .                                                                                                           |
| .....                         | As <i>Filicites?</i> sp.                                                                                                                         |
| .....                         | “ type of <i>Lycopodites Vanuxemi</i> .                                                                                                          |
| Ithaca, N. Y.                 | “ <i>Lycopodites Vanuxemi</i> . Imprint in sandstone.                                                                                            |
| Franklin, N. Y.               | Imbedded fragment. Delaware (?) County.                                                                                                          |
| Perry, Me.                    | Imbedded.                                                                                                                                        |
| .....                         | See <i>Archæopteris laxa</i> .                                                                                                                   |
| Cuyahoga Falls, O.            | Imprint in sandstone.                                                                                                                            |
| Near Elmira, N. Y.            | Interior cast and exterior imprint of fragment seven inches long.                                                                                |

PORIFERA.

Class PLETHOSPONGIÆ.

|                     |                                        |
|---------------------|----------------------------------------|
| .....               | As <i>Dictyophyton annulatum</i> .     |
| Western New York.   | Exterior imprint and the cast thereof. |
| Chemung Riv., N. Y. | Internal cast; from the “ Narrows.”    |
| .....               | See <i>Polypora distans</i> .          |

Class PLETHOSPONGIÆ—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.      | REFERENCE.  |       |       |       |       |
|------------------|------------------|----------------------|---------------------------------|-------------|-------|-------|-------|-------|
|                  |                  |                      |                                 | Work.       | Vol.  | P.    | Pl.   | Figs. |
| Chem.            | $\frac{4436}{1}$ | Type.                | <b>Dictyophyton</b> Hall.       |             |       |       |       |       |
|                  |                  |                      | <i>annulatum</i> .....          | .....       | ..... | ..... | ..... | ..... |
|                  |                  |                      | <i>filitextile</i> .....        | .....       | ..... | ..... | ..... | ..... |
|                  |                  |                      | <i>nodosum</i> .....            | .....       | ..... | ..... | ..... | ..... |
|                  |                  |                      | <i>parallelum</i> .....         | .....       | ..... | ..... | ..... | ..... |
|                  |                  |                      | <i>tuberosum</i> .....          | .....       | ..... | ..... | ..... | ..... |
|                  | $\frac{4437}{1}$ | .....                | <b>Hydnoceras</b> Conrad.       |             |       |       |       |       |
|                  |                  |                      | <i>nodosum</i> .....Hall.       | N. Y. S. M. | 16    | 91    | 3     | 2     |
|                  |                  |                      | .....H. & C.                    | .....       | 35    | 472   | 18    | 6     |
|                  | $\frac{4438}{1}$ | Type.                | <i>tuberosum</i> (Con.)...Hall. | Pal. Sp.    | ..... | 109   | 2     | 2     |
|                  |                  |                      | .....H. & C.                    | N. Y. S. M. | 16    | 90    | ...   | ..... |
|                  |                  |                      | <b>Prismodictya</b> H. & C.     |             |       |       |       |       |
|                  | $\frac{4439}{1}$ | .....                | <i>filitextilis</i> .....Hall.  | .....       | 16    | 88    | 4     | 5     |
|                  |                  |                      | .....H. & C.                    | Pal. Sp.    | ..... | 86    | 21    | 7     |
|                  | $\frac{4439}{1}$ | .....                | <i>parallela</i> .....Hall.     | N. Y. S. M. | 35    | 471   | ..... | ..... |
|                  |                  |                      | .....H. & C.                    | Pal. Sp.    | ..... | 82    | 19    | 4     |

Subkingdom CŒLEENTERATA.

|      |                  |        |                                                      |             |          |       |       |               |
|------|------------------|--------|------------------------------------------------------|-------------|----------|-------|-------|---------------|
| Ham. | $\frac{4440}{1}$ | Fig'd. | <b>Acervularia</b> Schweigger.                       | Geol. Ia.   | 1, pt. 2 | 476   | I     | 8a, b         |
| "    | $\frac{4440}{2}$ | "      | Davidson ( <i>E. &amp; H.</i> )?.. <i>H.</i>         | " "         | 1, pt. 2 | 477   | I     | 7a-c          |
|      |                  |        | <i>profunda</i> .....                                | .....       | .....    | ..... | ..... | .....         |
| "    | $\frac{4441}{1}$ | Type.  | <b>Amplexus</b> Sowerby.                             | I. D. F.    | .....    | ..... | 19    | 20-23         |
| "    | $\frac{4442}{1}$ | "      | <i>hamiltoniæ</i> .....Hall.                         | "           | .....    | ..... | 32    | 8, 9          |
| "    | $\frac{4442}{2}$ | "      | <i>intermittens</i> .....Hall.                       | Geol. N. Y. | 4th D.   | ..... | T 49  | 2, 2a         |
| "    |                  | "      | .....H. & C.                                         | I. D. F.    | .....    | ..... | 32    | 10-15         |
| "    | $\frac{4443}{1}$ | Fig'd. | <b>Aulopora</b> Goldfuss.                            | Geol. N. Y. | 4th D.   | 209   | ct.87 | I             |
| "    | $\frac{4444}{1}$ | Type.  | <b>Cyathophyllum</b> Goldfuss.                       | I. D. F.    | .....    | ..... | 31    | 1, 2, 6-9, 13 |
| "    | $\frac{4444}{2}$ | "      | <i>conatum</i> .....Hall.                            | "           | .....    | ..... | 31    | 10            |
| "    | $\frac{4445}{1}$ | "      | <i>gradatum</i> .....Hall.                           | "           | .....    | ..... | 31    | 15, 16        |
| "    | $\frac{4446}{1}$ | Fig'd. | <i>Houghtoni</i> ( <i>Roming.</i> ).. <i>H.</i>      | "           | .....    | ..... | 30    | 1, 2          |
| "    | $\frac{4447}{1}$ | Type.  | <i>nepos</i> .....Hall.                              | "           | .....    | ..... | 22    | 10, 11        |
| "    | $\frac{4448}{1}$ | "      | <i>robustum</i> .....Hall.                           | "           | .....    | ..... | 22    | 1, 2, 14      |
| "    | "                | "      | "....."                                              | "           | .....    | ..... | 22    | 3-6           |
| "    | "                | "      | "....."                                              | "           | .....    | ..... | 22    | 7, 8          |
| "    | $\frac{4448}{2}$ | "      | "....."                                              | "           | .....    | ..... | 22    | 9             |
| "    | $\frac{4449}{1}$ | Fig'd. | <b>Cystiphyllum</b> Lonsdale.                        | "           | .....    | ..... | 28    | 3, 7          |
| "    | $\frac{4449}{2}$ | "      | <i>americanum</i> ( <i>E. &amp; H.</i> ).. <i>H.</i> | "           | .....    | ..... | 28    | 4             |
| "    | "                | "      | "....."                                              | "           | .....    | ..... | 30    | 10            |
| "    | $\frac{4450}{1}$ | Type.  | <i>conifollis</i> .....Hall.                         | "           | .....    | ..... | 30    | 4-7           |
| "    | $\frac{4450}{2}$ | "      | "....."                                              | "           | .....    | ..... | 30    | 8, 9          |
| "    | $\frac{4451}{1}$ | "      | <i>corrugatum</i> .....Hall.                         | "           | .....    | ..... | 29    | 14-16         |
| "    | $\frac{4452}{1}$ | "      | <i>varians</i> .....Hall.                            | "           | .....    | ..... | 28    | 8             |
| "    | $\frac{4452}{2}$ | "      | "....."                                              | "           | .....    | ..... | 29    | 13            |



| LOCALITY.              | REMARKS.                                                                                   |
|------------------------|--------------------------------------------------------------------------------------------|
| .....                  | See <i>Ceratodictya annulata</i> .                                                         |
| .....                  | “ <i>Prismodictya filitextilis</i> .                                                       |
| .....                  | “ <i>Hydnoceras nodosum</i> .                                                              |
| .....                  | “ <i>Prismodictya parallela</i> .                                                          |
| .....                  | “ <i>Hydnoceras tuberosum</i> .                                                            |
| .....                  | As <i>Dictyophyton nodosum</i> .                                                           |
| .....                  | “ “ “ Figure is enlarged to 1 $\frac{1}{3}$ diameters.                                     |
| Cattaraugus Co., N. Y. | Imprint of exterior.                                                                       |
| Addison, N. Y.         | As <i>Dictyophyton tuberosum</i> . This is the second specimen mentioned in the reference. |
| .....                  | As <i>Dictyophyton filitextile</i> .                                                       |
| Steuben Co., N. Y.     | Imprint of exterior.                                                                       |
| .....                  | As <i>Dictyophyton parallelum</i> .                                                        |
| Western N. Y.          | Imprint of exterior.                                                                       |

Class ACTINOZOA.

|                          |                                                                              |
|--------------------------|------------------------------------------------------------------------------|
| Hamburg, Ill.            | A weathered fragment.                                                        |
| Buffalo, Iowa.           | As the type of <i>Acervularia profunda</i> . Part of the colony was figured. |
| .....                    | See <i>Acervularia Davidsoni</i> .                                           |
| Near Moscow, N. Y.       | One entire individual and two smaller ones cut in longit. section.           |
| York, N. Y.              | As <i>Strombodes</i> — ? Two small individuals.                              |
| Moscow, N. Y.            | Three ordinary indiv. and an elongate fragm. showing longit. sect.           |
| York, N. Y.              | A considerable colony on a <i>Heliophyllum</i> .                             |
| Western N. Y.            | Two entire individuals and one entire and one fragm. longit. sect.           |
| Genesee Val., N. Y.      | Only a part of the specimen figured is now in the Museum.                    |
| “ “                      | A somewhat weathered individual with base wanting.                           |
| Livingston Co., N. Y.    | Part of large individual, broken to show longitudinal section.               |
| Genesee Val., N. Y.      | A very perfect individual.                                                   |
| Near York, N. Y.         | Young individual.                                                            |
| “ “                      | Large individual showing cut and polished transverse section.                |
| “ “                      | Individual of medium size.                                                   |
| Genesee Val., N. Y.      | Part of the half-cup used for the figure.                                    |
| Moscow, N. Y.            | Two fragments showing the sections. Not from Skaneateles Lake.               |
| Eighteen Mi. Crk., N. Y. | A double corallum.                                                           |
| “ “ “                    | Large individual, imperfect as to cup.                                       |
| Moscow, N. Y.            | Four individuals, one of which has been cut lengthwise.                      |
| Bosanquet, Ont.          | A long, slender specimen.                                                    |
| Skaneateles L., N. Y.    | Two individuals, one of which has been broken lengthwise.                    |
| York, N. Y.              | Fragment showing cross section.                                              |
| Moscow, N. Y.            | Longitudinal section, nearly entire.                                         |

Class ACTINOZOA—Continued.

| Geol. Subdiv. | Cat. No.          | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                                                    | REFERENCE.  |        |       |      |             |
|---------------|-------------------|-------------------|---------------------------------------------------------------------------------------------------------------|-------------|--------|-------|------|-------------|
|               |                   |                   |                                                                                                               | Work.       | Vol.   | P.    | Pl.  | Figs.       |
| U. H.         | $\frac{4140}{1}$  | Fig'd.            | <b>Cystiphyllum</b> Lonsd.—Cont.<br>( <b>Chonophyllum</b> .)<br>sulcatum ( <i>Bill.</i> ) . . . . . <i>H.</i> | I. D. F.    | .....  | ..... | 32   | 18          |
| Ham.          | $\frac{4453}{1}$  | Type.             | <b>Favosites</b> <i>Lamarck</i> .<br>hamiltoniæ . . . . . <i>Hall.</i>                                        | "           | .....  | ..... | 34   | 3, 6        |
| U. H.         | $\frac{2775}{10}$ | Fig'd.            | hemisphericus ( <i>Troost</i> ) <i>H.</i>                                                                     | "           | .....  | ..... | 2    | 2, 3        |
| "             | $\frac{2775}{8}$  | "                 | " " var. <i>H.</i>                                                                                            | "           | .....  | ..... | 2B   | 8           |
| "             | $\frac{2775a}{7}$ | Type.             | hemisphericus ( <i>Troost</i> ),<br>var. distortus . . . <i>Hall.</i>                                         | "           | .....  | ..... | 5    | 3           |
| "             | $\frac{2925}{6}$  | Fig'd.            | hemisphericus ( <i>Troost</i> ),<br>var. turbinatus ( <i>Bill.</i> ) <i>H.</i>                                | "           | .....  | ..... | 2B   | 7           |
| Ham.          | $\frac{4454}{1}$  | Type.             | <b>Heliophyllum</b> <i>Hall.</i><br>arachne . . . . . <i>Hall.</i>                                            | "           | .....  | ..... | 24   | 8-12, 14    |
| "             | $\frac{4455}{1}$  | "                 | confluens . . . . . <i>Hall.</i>                                                                              | "           | .....  | ..... | 26   | 3, 4        |
| "             | $\frac{4456}{1}$  | "                 | degener . . . . . <i>Hall.</i>                                                                                | "           | .....  | ..... | 25   | 8-11        |
| "             | $\frac{4457}{1}$  | Fig'd.            | Halli ( <i>E</i> & <i>H.</i> ) . . . <i>Hall.</i>                                                             | "           | .....  | ..... | 23   | 4, 5, 12    |
| "             | "                 | "                 | " " "                                                                                                         | "           | .....  | ..... | 25   | 4           |
| "             | $\frac{4458}{1}$  | Type.             | " ? var. obconicum. <i>H.</i>                                                                                 | "           | .....  | ..... | 25   | 2, 3, 5-7   |
| "             | $\frac{4459}{1}$  | "                 | " var. reflexum . . <i>H.</i>                                                                                 | "           | .....  | ..... | 23   | 12, 13      |
| "             | $\frac{4460}{1}$  | "                 | irregulare . . . . . <i>Hall.</i>                                                                             | "           | .....  | ..... | 24   | 7           |
| "             | $\frac{4461}{1}$  | "                 | proliferum . . . . . <i>Hall.</i>                                                                             | "           | .....  | ..... | 26   | 7, 13       |
| "             | $\frac{4461}{2}$  | "                 | " "                                                                                                           | "           | .....  | ..... | 26   | 1, 2        |
| U. H.         | $\frac{2928}{4}$  | Fig'd.            | <b>Michelinia</b> de Koninck.<br>( <b>Pleurodictyum</b> .)<br>convexa ( <i>d'Orb.</i> ) . . <i>Hall.</i>      | "           | .....  | ..... | 15   | 5           |
| Ham.          | $\frac{4462}{1}$  | "                 | stylopora ( <i>Eaton</i> ) . . <i>Hall.</i>                                                                   | "           | .....  | ..... | 18   | 1-3, 7      |
| "             | $\frac{4463}{1}$  | Type.             | dividua . . . . . <i>Hall.</i>                                                                                | "           | .....  | ..... | 18   | 13-17       |
| U. H.         | $\frac{2927}{3}$  | Fig'd.            | maxima ( <i>Troost</i> ) . . . <i>H.</i>                                                                      | "           | .....  | ..... | 16   | 6, 7        |
| Ham.          | $\frac{4464}{1}$  | Type.             | <b>Streptelasma</b> <i>Hall.</i><br>rectum . . . . . <i>Hall.</i>                                             | "           | .....  | ..... | 19   | 1, 2, 11-13 |
| "             | $\frac{4464}{2}$  | "                 | " "                                                                                                           | "           | .....  | ..... | 19   | 3, 5, 7, 8  |
| "             | $\frac{4465}{1}$  | "                 | ungula . . . . . <i>Hall.</i>                                                                                 | "           | .....  | ..... | 19   | 16, 24      |
| Ham.          | $\frac{4466}{1}$  | Fig'd.            | <b>Strombodes</b> <i>Schweigger</i> .<br>sp . . . . .                                                         | Geol. N. Y. | 4th D. | ..... | T.49 | 2, 2a       |
| Ham.          | $\frac{4466}{1}$  | Fig'd.            | <b>Trachypora</b> <i>Edw. &amp; Haime</i> .<br>elegantula ( <i>Bill.</i> ) . . <i>Hall.</i>                   | I. D. F.    | .....  | ..... | 33   | 1, 2, 4-7   |
| U. H.         | $\frac{3050}{1}$  | Type.             | <b>Zaphrentis</b> <i>Rafinesque</i> .<br>ampla . . . . . <i>Hall.</i>                                         | "           | .....  | ..... | 21   | 4           |
| Ham.          | $\frac{4467}{1}$  | Fig'd.            | Halli ( <i>E. &amp; H.</i> ) . . <i>Hall.</i>                                                                 | "           | .....  | ..... | 20   | 1, 5, 8     |
| "             | $\frac{4468}{1}$  | Type.             | simplex . . . . . <i>Hall.</i>                                                                                | "           | .....  | ..... | 21   | 6, 7, 9, 10 |

Class HYDROZOA.

|      |                     |       |                                                                                                  |                     |             |          |       |       |
|------|---------------------|-------|--------------------------------------------------------------------------------------------------|---------------------|-------------|----------|-------|-------|
| Ham. | $\frac{4469}{1}$    | Type. | <b>Desmograptus</b> .<br>devonicus . . . . . <i>Gurley</i> .<br><i>Hall.</i>                     | J. G.<br>Can. O. R. | 4<br>Dec. 2 | 84<br>58 | ..... | ..... |
| "    | $\frac{4470}{1}$    | "     | <b>Dictyonema</b> <i>Hall.</i><br>actinotum . . . . . <i>Gurley</i> .<br><i>cadens</i> . . . . . | J. G.               | 4           | 82       | ..... | ..... |
| Ham. | $\frac{4470}{2\&3}$ | Type. | <i>hamiltoniæ</i> . . . . . <i>Hall.</i>                                                         | Can. O. R.          | Dec. 2      | 58       | ..... | ..... |



| LOCALITY.                                                                          | REMARKS.                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Caledonia, N. Y.                                                                   | Imperfect, weathered cup. May have come from Mendon, N. Y.                                                                                                                                                                      |
| Shore of L. Erie, N. Y.<br>Near Louisville, Ky.<br>Erie Co., N. Y.                 | Part of a large mass.<br>Turbinate colony of typical form. Fig. 1 was not made from this.<br>A hemispheroidal fragment.                                                                                                         |
| Schoharie Co., N. Y.                                                               | Fragmentary. May have come from Albany county.                                                                                                                                                                                  |
| Schoharie?, N. Y.                                                                  | A conical colony cut longitudinally.                                                                                                                                                                                            |
| Genesee Val., N. Y.<br>" "                                                         | Two entire individuals.<br>A small group.                                                                                                                                                                                       |
| Skaneateles L., N. Y.                                                              | A large and a small individual.                                                                                                                                                                                                 |
| Genesee Val., N. Y.<br>" "                                                         | Two individuals, one cut transversely and the other longitudinally.<br>Two individuals, cut transversely.                                                                                                                       |
| York, N. Y.                                                                        | Somewhat weathered. Not from Skaneateles lake.                                                                                                                                                                                  |
| Genesee Val., N. Y.                                                                | Entire.                                                                                                                                                                                                                         |
| Darien, N. Y.<br>" "                                                               | Entire individual showing bud and a fragm. giving cross section.<br>A group of six calyces on one stem.                                                                                                                         |
| Livingston Co., N. Y.                                                              | Calyx with buds in several stages of growth.                                                                                                                                                                                    |
| Caledonia, N. Y.<br>York or Darien, N. Y.<br>Pavilion, N. Y.<br>Falls of the Ohio. | Large fragment showing longitudinal section,<br>A well preserved colony and a weathered mass cut longitudinally.<br>Five colonies, three of which have been cut to show sections.<br>Fragment cut to show longitudinal section. |
| Western, N. Y.<br>Genesee Val., N. Y.<br>Moscow, N. Y.                             | Four individuals. Enlargements are to two diameters.<br>Three individuals; one cut longitudinally.<br>Two individuals. The second figure is not an enlargement.                                                                 |
| .....                                                                              | See <i>Amplexus intermittens</i> .                                                                                                                                                                                              |
| Darien, N. Y.                                                                      | Six fragments. Some may not have come from this exact locality.                                                                                                                                                                 |
| Clarksville, N. Y.<br>Skaneateles L., N. Y.<br>Genesee Val., N. Y.                 | A large individual.<br>Parts of two individ. and a third which has been split lengthwise.<br>Three individuals, two of which have been cut longitudinally.                                                                      |
| Moscow, N. Y.                                                                      | As <i>Dictyonema cadens</i> . Hall. Nomen nudum. Part of a frond, imbedded.                                                                                                                                                     |
| Koshong Crk., N. Y.                                                                | Part of a frond, imb. See remark under <i>Dictyonema hamiltoniæ</i> .                                                                                                                                                           |
| .....                                                                              | See <i>Desmograptus devonicus</i> .                                                                                                                                                                                             |
| Moscow and Genesee Val., N. Y.                                                     | Two specimens, not very well preserved, which were the types of Hall's species, but the species was not described, and a co-specific form has been described by Gurley under the name <i>Dictyonema actinotum</i> , q. v.       |

Subkingdom ECHINODERMATA.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                         | REFERENCE.  |      |     |     |        |
|---------------|------------------|--------------------|--------------------------------------------------------------------|-------------|------|-----|-----|--------|
|               |                  |                    |                                                                    | Work.       | Vol. | P.  | Pl. | Figs.  |
| U. H.         | <u>2975</u><br>1 | Fig'd.             | <b>Codaster</b> McCoy.<br>pyramidatus ( <i>Shumard</i> ) <i>H.</i> | N. Y. S. M. | 15   | 152 | I   | 12, 13 |
| Ham.          | <u>4471</u><br>1 | Type.              | <b>Palæaster</b> Hall.<br>eucharis ..... <i>Hall</i>               | "           | 20   | 287 | 9   | 3-3a   |
| "             | <u>4471</u><br>2 | "                  | " " " "                                                            | "           | 20   | 287 | 9   | 3a     |
| "             | <u>4471</u><br>3 | "                  | " " " "                                                            | "           | 20   | 287 | 9   | 4      |
| Chem.         | <u>4472</u><br>1 | Gen. and Sp. Type. | <b>Ptilonaster</b> Hall.<br>princeps ..... <i>Hall.</i>            | "           | 20   | 292 | 9   | 9      |

Class CRINOIDEA.

|        |                  |                    |                                                                                                            |                                        |              |                   |               |                  |
|--------|------------------|--------------------|------------------------------------------------------------------------------------------------------------|----------------------------------------|--------------|-------------------|---------------|------------------|
| U. H.  | <u>2977</u><br>1 | Gen. and Sp. Type. | <b>Actinocrinus</b> Miller.<br><i>calypso</i> .....<br><i>eucharis</i> .....                               |                                        |              |                   |               |                  |
|        |                  |                    | <b>Arachnocrinus</b> M. & W.<br>bulbosus ..... <i>Hall.</i><br><i>M. &amp; W.</i>                          | N. Y. S. M.<br>Geol. Ill.              | 15<br>2      | 123<br>177        | I             | 19, 20           |
|        |                  |                    | <i>Cacabocrinus</i> Troost.....<br><i>glyptus</i> .....<br><i>liratus</i> .....                            |                                        |              |                   |               |                  |
|        |                  |                    | <b>Calceocrinus</b> Hall.<br>clarus ..... <i>Hall.</i>                                                     | N. Y. S. M.                            | 15           | 116               | I             | 17               |
|        |                  |                    | <i>Cheirocrinus</i> Hall .....<br><i>clarus</i> ....                                                       |                                        |              |                   |               |                  |
| Port.  | <u>4474</u><br>1 | "                  | <b>Cyathocrinus</b> Miller.<br><i>bulbosus</i> .....<br><i>ornatissimus</i> ..... <i>Hall.</i>             | Geol. N. Y.                            | 4th D.       | 247               | ct. 108       | I                |
| Ham.   | <u>4475</u><br>1 | "                  | <b>Dolatocrinus</b> Lyon.<br><i>glyptus</i> ..... <i>Hall.</i><br><i>W. &amp; S.</i>                       | N. Y. S. M.<br>M. M. C. Z.             | 15<br>20     | 140<br>317        |               | 26               |
| "      | <u>4476</u><br>1 | "                  | <i>liratus</i> ..... <i>Hall.</i><br><i>W. &amp; S.</i>                                                    | N. Y. S. M.<br>M. M. C. Z.             | 15<br>20     | 139<br>319        |               | 26               |
| U. H.  | <u>2980</u><br>1 | "                  | <b>Edriocrinus</b> Hall.<br>pyriformis ..... <i>Hall.</i>                                                  | N. Y. S. M.                            | 15           | 116               | I             | 23, 24           |
| Orisk. | <u>2721</u><br>1 | "                  | sacculus ..... <i>Hall.</i>                                                                                | Pal. N. Y.                             | 3            | 143               | 87            | 1-18, 21, 22     |
| "      | <u>2721</u><br>2 | "                  | " " " "                                                                                                    | " "                                    | 3            | 143               | 62<br>87      | 8, 9<br>19, 20   |
| Ham.   | <u>4477</u><br>1 | "                  | <b>Forbesiocrinus</b> de K. & le Hon.<br><i>lobatus</i> .....<br><i>nuntius</i> .....                      |                                        |              |                   |               |                  |
|        |                  |                    | <b>Gennæocrinus</b> W. & S.<br><i>calypso</i> ..... <i>Hall.</i>                                           | N. Y. S. M.                            | 15           | 133               |               |                  |
|        |                  |                    | <i>eucharis</i> ..... <i>Hall.</i>                                                                         | " "                                    | 15           | 130               |               |                  |
|        |                  |                    | <b>Gilbertsocrinus</b> Phillips.<br>spinigerus ( <i>Hall</i> ). <i>Whitf.</i><br>" "<br><i>W. &amp; S.</i> | N. Y. Acad.<br>Geol. O.<br>M. M. C. Z. | 5<br>7<br>20 | 553<br>447<br>247 | 11<br>7<br>15 | 12<br>12<br>3a-c |



Class ASTEROIDEA.

| LOCALITY.             | REMARKS.                                                                                                       |
|-----------------------|----------------------------------------------------------------------------------------------------------------|
| Caledonia, N. Y.      | A silicified body. Figures are enlargements to two diameters.                                                  |
| Near Madison, N. Y.   | Very perfect imprints of the dorsal and ventral sides of the same individual.                                  |
| Nr. Fultonham, N. Y.  | Imprint of ventral side used for some of the details of the figure.                                            |
| Summit, N. Y.         | The specimen as described and its counterpart. The locality is in Schoharie county.                            |
| Cortland, N. Y.       | Imprint in sandstone.                                                                                          |
| .....                 | See <i>Gennæocrinus calypso</i> .                                                                              |
| .....                 | “ “ <i>eucharis</i> .                                                                                          |
| .....                 | As <i>Cyathocrinus</i> (?) <i>bulbosus</i> .                                                                   |
| Livingston Co., N. Y. | Genus proposed. Calyx and parts of two arms partly silicified.                                                 |
| .....                 | Synonym of <i>Dolatocrinus</i> .                                                                               |
| .....                 | See <i>Dolatocrinus glyptus</i> .                                                                              |
| .....                 | “ “ <i>liratus</i> .                                                                                           |
| Canandaigua L., N.Y.  | As <i>Cheirocrinus clarus</i> . Imbedded.                                                                      |
| .....                 | Synonym of <i>Calceocrinus</i> .                                                                               |
| .....                 | See <i>Calceocrinus clarus</i> .                                                                               |
| .....                 | See <i>Arachnocrinus bulbosus</i> .                                                                            |
| Portland, N. Y.       | Body, arms and part of column; imbedded. Properly a <i>Maria-crinus</i> . From the lake shore.                 |
| .....                 | As <i>Cacabocrinus glyptus</i> .                                                                               |
| Pavilion, N. Y.       | A calyx preserving arm bases.                                                                                  |
| .....                 | As <i>Cacabocrinus liratus</i> .                                                                               |
| Near Bellona, N. Y.   | A calyx preserving arm bases.                                                                                  |
| Near Utica, N. Y.     | Three calices used in making the figures.                                                                      |
| Cumberland, Md.       | A series of fourteen silicified specimens.                                                                     |
| S. W. Pennsylvania.   | Very large calyx showing basal and first radial plates. From near Cumberland, Md.                              |
| .....                 | See <i>Taxocrinus lobatus</i> .                                                                                |
| .....                 | “ “ <i>nuntius</i> .                                                                                           |
| Genesee Val., N. Y.   | As <i>Actinocrinus calypso</i> . Crushed calyx with arms attached ; imbedded. From Jacock’s Run.               |
| “ “                   | As <i>Actinocrinus eucharis</i> . Compressed calyx with arms and part of column ; imbedded. From Jacock’s Run. |
| Sulphur Springs, O.   | A calyx without arms. Locality is in Delaware county.                                                          |

Class CRINOIDEA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                             | REFERENCE.               |                |            |      |           |
|------------------|------------------|----------------------|----------------------------------------------------------------------------------------|--------------------------|----------------|------------|------|-----------|
|                  |                  |                      |                                                                                        | Work.                    | Vol.           | P.         | Pl.  | Figs.     |
| Mar.             | $\frac{4371}{1}$ | Type.                | <b>Haplocrinus</b> Steininger.<br>clio ..... <i>Hall.</i>                              | N. Y. S. M.              | 15             | 143        | I    | 5-9       |
| Orisk.           | $\frac{2727}{1}$ | "                    | <b>Homocrinus</b> Hall.<br>proboscidualis..... <i>Hall.</i>                            | Pal. N. Y.               | 3              | 138        | 85   | 24, 25    |
| Ham.             | $\frac{4480}{1}$ | "                    | <b>Megistocrinus</b> Ow.& Shum.<br>depressus..... <i>Hall.</i>                         | N. Y. S. M.<br>Geol. Ia. | 15<br>I, pt. 2 | 134<br>481 | .... | 53        |
| "                | $\frac{4481}{1}$ | "                    | latus..... <i>Hall.</i>                                                                | " "                      | I, pt. 2       | 480        | I    | 1a, b     |
| " ?              | $\frac{4482}{1}$ | "                    | <b>Melocrinus</b> Goldfuss.<br>nodosus ..... <i>Hall.</i><br><i>Whitf.</i>             | Geol. Wis.<br>Mem. A. M. | 1861<br>I      | 19<br>48   | 5    | 14        |
| U. H.            | $\frac{2976}{1}$ | "                    | <b>Myrtillocrinus</b> Sandberger.<br>? americanus ..... <i>Hall.</i>                   | N. Y. S. M.              | 15             | 142        | I    | 2-4       |
| Ham.             | $\frac{4483}{1}$ | "                    | <b>Platycrinus</b> Miller.<br>eriensis ..... <i>Hall.</i>                              | " "                      | 15             | 119        | I    | I         |
| "                | $\frac{4484}{1}$ | "                    | <b>Poteriocrinus</b> Miller.<br>nassa ..... <i>Hall.</i>                               | " "                      | 15             | 120        | .... | ....      |
| "                | $\frac{4485}{1}$ | "                    | <b>Rhodocrinus</b> Miller.<br>( <b>Acanthocrinus</b> )<br>nodulosus ..... <i>Hall.</i> | " "                      | 15             | 126        | .... | ....      |
| "                | $\frac{4486}{1}$ | "                    | <b>Taxocrinus</b> Phillips.<br>lobatus..... <i>Hall.</i>                               | " "                      | 15             | 124        | .... | ....      |
| "                | $\frac{4487}{1}$ | "                    | nuntius ..... <i>Hall.</i>                                                             | " "                      | 15             | 124        | .... | ....      |
| Orisk.           | $\frac{2724}{1}$ | "                    | <b>Technocrinus</b> Hall.....<br>Andrewsi..... <i>Hall.</i>                            | Pal. N. Y.               | 3              | 141        | 86   | I, 1a     |
| "                | "                | "                    | " ..... <i>Hall.</i>                                                                   | " "                      | 3              | 141        | 86   | 2-4       |
| "                | $\frac{2725}{1}$ | "                    | sculptus ..... <i>Hall.</i>                                                            | " "                      | 3              | 143        | 86   | 13, 14    |
| "                | $\frac{2723}{1}$ | Gen. and<br>Sp Type. | spinulosus..... <i>Hall.</i>                                                           | " "                      | 3              | 140        | 85   | I, 2      |
| "                | "                | "                    | ..... <i>Hall.</i>                                                                     | W. & S. M. M. C. Z.      | 20             | 305        | 22   | 3         |
| "                | $\frac{2724}{1}$ | Type.                | striatus ..... <i>Hall.</i>                                                            | Pal. N. Y.               | 3              | 140        | 85   | 3-18      |
| "                | $\frac{2722}{1}$ | Fig'd.               | Undetermined crinoidal re-<br>mains..... <i>Hall.</i>                                  | " "                      | 3              | 145        | 85   | 19-21, 23 |
| "                | $\frac{2719}{1}$ | "                    | Crinoidal or cystoidal remains<br>..... <i>Hall.</i>                                   | " "                      | 3              | 147        | 88   | 5-9       |

Class CYSTOIDEA.

|        |                  |       |                                                               |            |   |     |    |     |
|--------|------------------|-------|---------------------------------------------------------------|------------|---|-----|----|-----|
| Orisk. | $\frac{2720}{1}$ | Type. | <b>Anomalocystites</b> Hall.<br>disparilis ..... <i>Hall.</i> | Pal. N. Y. | 3 | 145 | 88 | I-4 |
|--------|------------------|-------|---------------------------------------------------------------|------------|---|-----|----|-----|



| LOCALITY.             | REMARKS.                                                                                                                                                |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Near Manlius, N. Y.   | Two minute calyces.                                                                                                                                     |
| Cumberland, Md.       | Silicified calyx preserving arms and proboscis.                                                                                                         |
| Seneca Lake, N. Y.    | As <i>Megistocrinus latus</i> Hall. The lower part of a flattened calyx. This specimen was used for a part, at least, of the figure in the Iowa report. |
| Buffalo, Iowa.        | Large calyx, somewhat compressed. See also <i>Megistocrinus depressus</i> .                                                                             |
| Near Milwaukee, Wis.  | A large and a small calyx, without arms. Found in the Drift.                                                                                            |
| Near Caledonia, N. Y. | A silicified calyx.                                                                                                                                     |
| Hamburg, N. Y.        | Calyx with portions of arms attached. Fig. is an enl. to 2 diam.                                                                                        |
| Canandaigua L., N.Y.  | A compressed calyx, imbedded.                                                                                                                           |
| Near Bellona, N. Y.   | A somewhat imperfect calyx.                                                                                                                             |
| Bristol, N. Y.        | As <i>Forbesiocr. lobatus</i> . Calyx with arms and part of column.                                                                                     |
| Hamburg, N. Y.        | As <i>Forbesiocr. nuntius</i> . Calyx with lower portion of arms.                                                                                       |
| .....                 | Defined as a subgenus of <i>Mariacrinus</i> .                                                                                                           |
| Cumberland, Md.       | Imprint in sandstone.                                                                                                                                   |
| “ “                   | Two silicified columns.                                                                                                                                 |
| “ “                   | The silicified basal portion of a calyx.                                                                                                                |
| “ “                   | Part of a silicified calyx with part of the column and some of the arm bases attached.                                                                  |
| “ “                   | Nine detached body plates and four column plates, silicified.                                                                                           |
| “ “                   | Seven separated plates and two conjoined. Prob.= <i>Technocrinus Andrewsii</i> .                                                                        |
| “ “                   | Four silicified column plates.                                                                                                                          |
| “ “                   | Three silicified plates.                                                                                                                                |
| Cumberland, Md.       | A siliceous cast.                                                                                                                                       |

Class BLASTOIDEA.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                              | REFERENCE.  |      |     |       |        |
|---------------|------------------|--------------------|---------------------------------------------------------|-------------|------|-----|-------|--------|
|               |                  |                    |                                                         | Work.       | Vol. | P.  | Pl.   | Figs.  |
| Ham.          | $\frac{4488}{1}$ | Type.              | <b>Eleutheroocrinus</b> S. & Y.<br>Whitfieldi.....Hall. | N. Y. S. M. | 15   | 151 | ..... | .....  |
| "             | $\frac{4489}{1}$ | Gen. and Sp. Type. | <b>Nucleocrinus</b> Conrad.<br>elegans.....Conrad.      | J. A. N. S. | 8    | 280 | 15    | 17     |
| "             | $\frac{4490}{1}$ | Type.              | .....Hall.                                              | N. Y. S. M. | 15   | 147 | I     | 14, 15 |
| "             | $\frac{4490}{2}$ | "                  | lucina.....Hall.                                        | " "         | 15   | 148 | ..... | .....  |
| "             |                  |                    | "....."                                                 | " "         | 15   | 148 | ..... | .....  |
| "             | $\frac{4491}{1}$ | "                  | <b>Pentremites</b> Say.<br>calyce.....Hall.             | " "         | 15   | 150 | ..... | .....  |
| "             | $\frac{4492}{1}$ | "                  | maia.....Hall.                                          | " "         | 15   | 150 | I     | 10     |

MOLLUSCOIDEA.

|       |                  |                   |                                                       |              |        |       |       |        |
|-------|------------------|-------------------|-------------------------------------------------------|--------------|--------|-------|-------|--------|
| "     | $\frac{4493}{1}$ | Gen. and Sp. Type | <b>Acrogenia</b> Hall.<br>prolifera.....Hall.         | T. A. I.     | 10     | 194   | ..... | .....  |
|       |                  |                   | <b>Callopora</b> Hall.<br>hyale.....                  | .....        | .....  | ..... | ..... | .....  |
|       |                  |                   | irregularis.....                                      | .....        | .....  | ..... | ..... | .....  |
| U. H. | $\frac{3018}{1}$ | Type.             | <b>Cœlocaulis</b> Hall.....<br>hyale.....Hall.        | N. Y. S. M.  | 26     | 100   | ..... | .....  |
| "     | $\frac{3017}{1}$ | "                 | .....                                                 | St. G. N. Y. | 2      | ....  | 12    | 18, 19 |
| "     |                  |                   | "                                                     | Pal. N. Y.   | 6      | 76    | 12    | 18, 19 |
| "     | $\frac{3017}{1}$ | "                 | irregularis.....Hall.                                 | T. A. I.     | 10     | 148   | ..... | .....  |
| "     |                  |                   | "                                                     | St. G. N. Y. | 2      | ....  | 24    | 13-15  |
| "     |                  |                   | "                                                     | Pal. N. Y.   | 6      | 76    | 26    | 13-15  |
| Ham.  | $\frac{4494}{1}$ | "                 | <b>Coscinium</b> Keyserling.<br>striatum.....Hall.    | " "          | 6      | 238   | 64    | 13-16  |
| "     | $\frac{4495}{1}$ | "                 | <b>Fenestella</b> Lonsdale.<br>emaciata.....Hall.     | N. Y. S. M.  | 36     | 68    |       |        |
| "     | $\frac{4497}{1}$ | "                 | "                                                     | " "          | 41     | ....  | 8     | 9-13   |
| "     |                  |                   | subtortilis.....Hall.                                 | " "          | 36     | 71    | ..... | .....  |
| "     | $\frac{4498}{1}$ | "                 | <b>Fistulipora</b> McCoy.<br>interaspera.....Hall.    | Pal. N. Y.   | 6      | 218   | ..... | .....  |
| "     | $\frac{4499}{1}$ | "                 | spheroidea.....Hall.                                  | T. A. I.     | 10     | 187   | ..... | .....  |
| "     |                  |                   | "                                                     | St. G. N. Y. | 3      | 31    | ..... | .....  |
| "     |                  |                   | "                                                     | Pal. N. Y.   | 6      | 225   | 57    | 3, 4   |
| "     | $\frac{4500}{1}$ | Gen. and Sp. Type | <b>Hernodia</b> Hall.<br>humifusa.....Hall.           | T. A. I.     | 10     | 196   |       |        |
| "     |                  |                   | "                                                     | St. G. N. Y. | 3      | 58    |       |        |
| "     |                  |                   | "                                                     | Pal. N. Y.   | 6      | 281   | 65    | 20, 21 |
| "     | $\frac{4501}{1}$ | Type.             | <b>Lichenalia</b> Hall.<br>distan.....Hall.           | " "          | 6      | 197   | ..... | .....  |
| "     | $\frac{4502}{1}$ | "                 | tessellata.....Hall.                                  | " "          | 6      | 207   | ..... | .....  |
| "     | $\frac{4503}{1}$ | "                 | vesiculata.....Hall.                                  | " "          | 6      | 198   | 59    | 14     |
| U. H. | $\frac{2983}{1}$ | Fig'd.            | <b>Polypora</b> McCoy.<br>distan (Hall)....Eaton.     | Geol. T. B.  | 2d Ed. | 43    | 5     | 59, 60 |
|       |                  |                   | <i>Ptilionella</i> Hall.....                          | .....        | .....  | ..... | ..... | .....  |
|       |                  |                   | <i>penniiformis</i> .....                             | .....        | .....  | ..... | ..... | .....  |
| Ham.  | $\frac{4504}{1}$ | "                 | <b>Reptaria</b> Rolle.<br>stolonifera (Rolle) ..Hall. | T. A. I.     | 10     | 195   | ..... | .....  |
| "     |                  |                   | "                                                     | St. G. N. Y. | 3      | 56    | ..... | .....  |
| "     |                  |                   | "                                                     | Pal. N. Y.   | 6      | 274   | 65    | 17-19  |



| LOCALITY.                                      | REMARKS.                                                                                                                                 |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Muttonville, N. Y.                             | A crushed body. One of the two types. Ontario county.                                                                                    |
| Moscow, N. Y.<br>Bellona, N. Y.<br>York, N. Y. | Three individuals, the largest of which was Conrad's type spec.<br>One small and two large calyces.<br>A large and a medium sized calyx. |
| Genesee Co., N. Y.<br>Moscow, N. Y.            | A somewhat crushed calyx.<br>A calyx partly surrounded by pyrite.                                                                        |

Class POLYZOA.

|                       |                                                                                     |
|-----------------------|-------------------------------------------------------------------------------------|
| 18 Mile Creek, N.Y.   | A large branching frond. Figure drawn but not published.                            |
| .....                 | See <i>Cælocaulis hyale</i> .                                                       |
| .....                 | “ <i>Cælocaulis irregularis</i> .                                                   |
| .....                 | Defined as a subgenus of <i>Callopora</i> .                                         |
| .....                 | As <i>Callopora hyale</i> .                                                         |
| .....                 | “ “ “                                                                               |
| Onondaga Val., N. Y.  | A partly crushed branch, imbedded.                                                  |
| .....                 | As <i>Callopora irregularis</i> .                                                   |
| .....                 | “ <i>Trematopora (Callopora) irregularis</i> .                                      |
| Central New York.     | A rather large fragment, imbedded.                                                  |
| Widder, Ont.          | A large fragment, imbedded.                                                         |
| Seneca Lake, N. Y.    | An imbedded frond and several detached branches.                                    |
| “ “ “                 | Shows non-celluliferous surface. Figured, but fig. not published.                   |
| York, N. Y.           | Coating a cyathophylloid coral.                                                     |
| .....                 | As <i>Thallistigma spherioidum</i> .                                                |
| .....                 | “ “ “                                                                               |
| York, N. Y.           | A spheroidal mass, imbedded.                                                        |
| Cazenovia, N. Y.      | Colony on a cast of <i>Gomphoceras abruptum</i> .                                   |
| York, N. Y.           | A large surface on a fragment of a <i>Cystiphyllum</i> .                            |
| Genesee Val., N. Y.   | A detached mass and thin sections from it.                                          |
| Darien, N. Y.         | A considerable fragment, imbedded.                                                  |
| The Helderbergs, N.Y. | As the type of <i>Coscinopora macropora</i> Eaton. Shows non-celluliferous surface. |
| .....                 | Synonym of <i>Reptaria</i> .                                                        |
| .....                 | See <i>Reptaria stolonifera</i> .                                                   |
| .....                 | As type of <i>Ptilionella penniformis</i> .                                         |
| .....                 | “ “ “ “ “                                                                           |
| Cazenovia, N. Y.      | Colonies on two fragmentary casts of <i>Orthoceras constrictum</i> .                |

MOLLUSCOIDEA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.   | REFERENCE. |       |       |       |       |
|---------------|------------------|-------------------|------------------------------|------------|-------|-------|-------|-------|
|               |                  |                   |                              | Work.      | Vol.  | P.    | Pl.   | Figs. |
| Ham.          | $\frac{4505}{1}$ | Type.             | <b>Thallostigma</b> Hall.    |            |       |       |       |       |
|               |                  |                   | <i>spheroideum</i> .....     | .....      | ..... | ..... | ..... | ..... |
|               |                  |                   | <b>Trematopora</b> Hall.     |            |       |       |       |       |
|               |                  |                   | ( <b>Orthopora.</b> )        |            |       |       |       |       |
|               |                  |                   | <i>interplana</i> .....Hall. | Pal. N. Y. | 6     | 186   | 56    | 12    |
|               |                  |                   | <i>irregularis</i> .....     | .....      | ..... | ..... | ..... | ..... |

Class BRACHIOPODA.

|       |                   |                         |                                 |              |          |     |              |    |               |
|-------|-------------------|-------------------------|---------------------------------|--------------|----------|-----|--------------|----|---------------|
|       |                   |                         | <b>Ambocœlia</b> Hall.          |              |          |     |              |    |               |
|       |                   |                         | <i>gregaria</i> .....           |              |          |     |              |    |               |
| Ham.  | $\frac{4506}{1}$  | Type.                   | <i>præumbona</i> .....Hall.     | N. Y. S. M.  | 10       | 167 | ....         |    |               |
|       |                   |                         | “                               | Pal. N. Y.   | 4        | 262 | 44           |    | 3-5           |
|       |                   |                         | <i>subombonata</i> .....        |              |          |     |              |    |               |
| “     | $\frac{4379}{2}$  | Fig'd Sp.<br>and G. T.  | <i>umbonata</i> (Con.) ...Hall. | N. Y. S. M.  | 13       | 71  | ....         |    | 1-6           |
|       |                   |                         | “                               | Pal. N. Y.   | 4        | 259 | p. 260<br>44 |    | 1-6<br>7-16   |
|       |                   |                         | H. & C.                         | St. G. N. Y. | 13       | 761 | 31           |    | 8-12          |
|       |                   |                         | “                               | Pal. N. Y.   | 8, pt. 2 | 55  | 39           |    | 4-8           |
| “     | “                 | “                       | “                               | “            | “        | 4   | 259          | 44 | 17            |
|       |                   |                         | H. & C.                         | “            | 8, pt. 2 | 55  | 39           |    | 9             |
| Mar.  | $\frac{4379}{1}$  | Fig'd.                  | “                               | Geol. N. Y.  | 4th D.   | 181 | ct. 71       |    | 8, n. s.      |
|       |                   |                         | “                               | N. Y. S. M.  | 13       | 71  | ....         |    |               |
|       |                   |                         | “                               | Pal. N. Y.   | 4        | 259 | 44           |    | 18, v. v. X 2 |
| Chem. | $\frac{4507}{1}$  | Type.                   | <i>var. gregaria</i> .....Hall. | “            | 4        | 261 | 44           |    | 19, d. v. X 2 |
|       |                   |                         | “                               | N. Y. S. M.  | 13       | 81  | ....         |    |               |
|       |                   |                         | “                               | Geol. N. Y.  | 4th D.   | 268 | ct. 121      |    | 5c, d. v.     |
| “     | $\frac{4507}{2}$  | “                       | “                               | Pal. N. Y.   | 4        | 261 | 44           |    | 20-22         |
|       |                   |                         | “                               | N. Y. S. M.  | 13       | 81  | ....         |    |               |
| “     | “                 | Fig'd.                  | “                               | Geol. N. Y.  | 4th D.   | 268 | ct. 121      |    | 5b, v. v.     |
|       |                   |                         | “                               | N. Y. S. M.  | 13       | 81  | ....         |    |               |
| “     | $\frac{4507}{3}$  | “                       | “                               | Geol. N. Y.  | 4th D.   | 268 | ct. 121      |    | 5d, v. v.     |
|       |                   |                         | “                               | N. Y. S. M.  | 13       | 81  | ....         |    |               |
|       |                   |                         | <b>Amphigenia</b> Hall.         |              |          |     |              |    |               |
| U. H. | $\frac{3082}{3}$  | Fig'd. Sp.<br>and G. T. | <i>elongata</i> (Vanux.)..Hall. | Pal. N. Y.   | 4        | 383 | 59           |    | 1, d. v.      |
|       |                   |                         | H. & C.                         | St. G. N. Y. | 13       | 848 | 49           |    | 15, “         |
|       |                   |                         | “                               | Pal. N. Y.   | 8, pt. 2 | 252 | 74           |    | 6, “          |
| “     | $\frac{3082}{2}$  | “                       | “                               | “            | 4        | 383 | 59           |    | 9, int. d. v. |
|       |                   |                         | H. & C.                         | “            | 8, pt. 2 | 252 | 74           |    | 8, “          |
| “     | $\frac{3082}{1}$  | “                       | “                               | “            | 4        | 383 | 59           |    | 10, sect.     |
|       |                   |                         | H. & C.                         | St. G. N. Y. | 13       | 848 | 49           |    | 14, “         |
|       |                   |                         | “                               | Pal. N. Y.   | 8, pt. 2 | 252 | 74           |    | 3, “          |
| “     | “                 | “                       | “                               | “            | 4        | 383 | 59           |    | 11            |
|       |                   |                         | H. & C.                         | St. G. N. Y. | 13       | 848 | 49           |    | 12            |
|       |                   |                         | “                               | Pal. N. Y.   | 8, pt. 2 | 252 | 74           |    | 2             |
| “     | $\frac{3082a}{5}$ | Type.                   | “ <i>var. undulata</i> . Hall.  | “            | 4        | 384 | 58a          |    | 25, ext.      |
|       |                   |                         |                                 |              |          |     |              |    |               |
|       |                   |                         | <b>Athyris</b> McCoy.           |              |          |     |              |    |               |
| Chem. | $\frac{4508}{1}$  | “                       | <i>angelica</i> .....Hall.      | N. Y. S. M.  | 14       | 99  |              |    |               |
|       |                   |                         | “                               | Pal. N. Y.   | 4        | 292 | 47           |    | 9, d. v.      |
|       |                   |                         | H. & C.                         | “            | 8, pt. 2 | 90  | 45           |    | 26, “         |
| “     | $\frac{4508}{2}$  | “                       | “                               | “            | 4        | 292 | 47           |    | 10, 12, 20    |



Class POLYZOA.

| LOCALITY.                               | REMARKS.                                                                                                                      |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| .....                                   | See <i>Fistulipora spheroides</i> .                                                                                           |
| Genesee Val., N. Y.<br>.....            | A small fragment, imbedded.<br>See <i>Cælocaulis irregularis</i> .                                                            |
| .....                                   | See <i>Ambocælia umbonata</i> var. <i>gregaria</i> .<br>As <i>Orthis præumbona</i> .                                          |
| Near Lodi, N. Y.<br>.....               | Two ventral valves. From "Baileytown," on Seneca lake.<br>See <i>Spirifer subumbona</i> .                                     |
| .....                                   | Figures 8 and 9 are not enlargements.<br>A large individual, a ventral valve and two dorsal valves.                           |
| Moscow, N. Y.<br>" "                    | Individ. from which the vent. valve has been removed to show the<br>spires.                                                   |
| .....                                   | As type of <i>Orthis nucleus</i> .                                                                                            |
| .....                                   | " <i>Ambocælia nucleus</i> .                                                                                                  |
| Avon, N. Y.                             | An imbedded individual showing ventral valve.                                                                                 |
| .....                                   | As type of <i>Ambocælia gregaria</i> .                                                                                        |
| Painted Post, N. Y.                     | " <i>Orthis unguiculus</i> Sowerby. Individual imbedded so that it<br>shows the exfoliated dorsal valve.                      |
| Dexterville, N. Y.                      | As type of <i>Ambocælia gregaria</i> . A ventral valve and the internal<br>cast of a dorsal valve.                            |
| " "                                     | As type of <i>Ambocælia gregaria</i> . Cast of ventral valve, imbedded.                                                       |
| Jasper, N. Y.                           | As type of <i>Ambocælia gregaria</i> . A block showing many shells and<br>casts.                                              |
| Ontario Co., N. Y.                      | Internal cast of dorsal valve retaining some shell.                                                                           |
| Clarence Hollow, N. Y.                  | Internal cast of dorsal valve.                                                                                                |
| Nr. Williamsville, N. Y.                | Entire internal cast split longitudinally.                                                                                    |
| " " "                                   | Upper part of an internal cast of conjoined valves.                                                                           |
| Mackinac, Mich.                         | A ventral valve, imbedded. From the "Arched Rock."                                                                            |
| Nr. Friendship, N. Y.<br>Belmont, N. Y. | A partly exfoliated dorsal valve, imbedded. From "Rockville."<br>Three valves, two ventral and a dorsal, imbedded separately. |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR. | REFERENCE.   |          |      |        |               |
|---------------|------------------|-------------------|----------------------------|--------------|----------|------|--------|---------------|
|               |                  |                   |                            | Work.        | Vol.     | P.   | Pl.    | Figs.         |
|               |                  |                   | <b>Athyris McCoy—Cont.</b> |              |          |      |        |               |
| Chem.         | <u>4508</u><br>2 | Type.             | angelica.....Hall.         | Pal. N. Y.   | 4        | 292  | 47     | 11, 15        |
|               |                  |                   | H. & C.                    | " "          | 8, pt. 2 | 90   | 45     | 27, 28        |
| "             | <u>4508</u><br>3 | "                 | ".....Hall.                | " "          | 4        | 292  | 47     | 13, v.v.      |
| "             | <u>4508</u><br>4 | "                 | "....."                    | " "          | 4        | 292  | 47     | 16-19         |
| Ham.          | <u>4509</u><br>1 | "                 | cora.....Hall.             | N. Y. S. M.  | 13       | 94   |        |               |
|               |                  |                   | "                          | Pal. N. Y.   | 4        | 291  | 47     | 1-7           |
|               |                  |                   | H. & C.                    | " "          | 8, pt. 2 | 90   | 45     | 6-10          |
| "             | <u>4510</u><br>1 | Fig'd.            | fultonensis (Swallow).H.   | " "          | 4        | 289  | ....   | Outline.      |
| Chem.         | <u>4511</u><br>1 | Type.             | ? polita.....Hall.         | Geol. N. Y.  | 4th D.   | .... | t. 66  | 5             |
|               |                  |                   | "                          | Pal. N. Y.   | 4        | 293  | 47     | 21-26         |
|               |                  |                   | H. & C.                    | " "          | 8, pt. 2 | .... | 46     | 3-5           |
| "             | <u>4511</u><br>2 | "                 | ".....Hall.                | " "          | 4        | 293  | 47     | 27-29         |
|               |                  |                   | H. & C.                    | " "          | 8, pt. 2 | .... | 46     | 1, 2          |
| Ham.          | <u>4512</u><br>1 | Fig'd.            | spiriferoides (Eaton)...H. | Geol. N. Y.  | 4th D.   | 199  | ct. 79 | 5, 5a         |
|               |                  |                   | "                          | N. Y. S. M.  | 13       | 153  | ....   | 1-2           |
| "             | <u>4512</u><br>2 | "                 | " " " "                    | Pal. N. Y.   | 4        | 285  | 46     | 8, 12         |
|               |                  |                   | H. & C.                    | " "          | 8, pt. 2 | 89   | 45     | 16, d. v.     |
| "             | <u>4512</u><br>3 | "                 | " " " H.                   | " "          | 4        | 285  | 46     | 10            |
| "             | <u>4512</u><br>1 | "                 | " " " "                    | " "          | 4        | 285  | 46     | 14-24         |
|               |                  |                   | H. & C.                    | " "          | 8, pt. 2 | 89   | 45     | 18-21         |
| "             | <u>4512</u><br>4 | "                 | " " " Hall.                | " "          | 4        | 285  | 46     | 26, int.      |
| "             | <u>4512</u><br>5 | "                 | " " " "                    | " "          | 4        | 285  | 46     | 28, 29        |
|               |                  |                   | H. & C.                    | " "          | 8, pt. 2 | 89   | 45     | 22, int.      |
| "             | <u>4512</u><br>1 | "                 | " " " Hall.                | " "          | 4        | 285  | 46     | 31, d. v.     |
|               |                  |                   |                            |              |          |      | 47     | 8, v. v.      |
|               |                  |                   | H. & C.                    | " "          | 8, pt. 2 | 89   | 45     | 23, "         |
| "             | <u>4512</u><br>4 | "                 | " " " Hall.                | " "          | 4        | 284  | ....   | Diagram       |
| "             | <u>4513</u><br>1 | Type.             | vittata.....Hall.          | " "          | 4        | 289  | 46     | 1-4           |
|               |                  |                   | H. & C.                    | St. G. N. Y. | 13       | .... | 35     | 1, d v.       |
|               |                  |                   | "                          | Pal. N. Y.   | 8, pt. 2 | 89   | 45     | 1-3           |
|               |                  |                   | <b>Atrypa Dalman.</b>      |              |          |      |        |               |
|               |                  |                   | affinis.....               |              |          |      |        |               |
| "             | <u>4514</u><br>1 | "                 | aspera Schloth.            |              |          |      |        |               |
|               |                  |                   | var. occidentalis..Hall.   | Geol. Ia.    | 1, pt. 2 | 515  | 6      | 3, b-d.       |
|               |                  |                   | "                          | Pal. N. Y.   | 4        | .... | 53A    | 19-21         |
|               |                  |                   | H. & C.                    | St. G. N. Y. | 13       | .... | 41     | 17            |
|               |                  |                   | "                          | Pal. N. Y.   | 8, pt. 2 | 170  | 55     | 18, 19        |
|               |                  |                   | camura.....                |              |          |      |        |               |
|               |                  |                   | concentrica.....           |              |          |      |        |               |
|               |                  |                   | concinna.....              |              |          |      |        |               |
|               |                  |                   | contracta.....             |              |          |      |        |               |
|               |                  |                   | dumosa.....                |              |          |      |        |               |
|               |                  |                   | eximia.....                |              |          |      |        |               |
|               |                  |                   | hirsuta.....               |              |          |      |        |               |
| Chem.         | <u>4515</u><br>1 | "                 | hystrix.....Hall.          | Pal. N. Y.   | 4        | 326  | 53A    | 15, ext. v.v. |
| "             | <u>4515</u><br>2 | "                 | "....."                    | " "          | 4        | 326  | 53A    | 16, " "       |
|               |                  |                   | H. & C.                    | St. G. N. Y. | 13       | .... | 41     | 16, " "       |
|               |                  |                   | "                          | Pal. N. Y.   | 8, pt. 2 | 172  | 55     | 23, " "       |
| "             | <u>4515</u><br>3 | "                 | ".....Hall.                | " "          | 4        | 326  | 53A    | 17, " "       |
| Scho.         | <u>2835</u><br>1 | "                 | impressa.....Hall.         | " "          | 4        | 315  | 51     | 4, 5          |
| "             | "                | "                 | "....."                    | " "          | 4        | 315  | 51     | 6, 7          |
| "             | "                | "                 | "....."                    | " "          | 4        | 315  | 51     | 8, int. d. v. |
|               |                  |                   | laticostata.....           |              |          |      |        |               |
|               |                  |                   | mesacotalis.....           |              |          |      |        |               |
|               |                  |                   | polita.....                |              |          |      |        |               |



| LOCALITY.                                                                                              | REMARKS.                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Belmont, N. Y.<br>Nr. Great Val., N. Y.<br>Western New York.                                           | A vent. valve and the internal cast of another, imbedded separately.<br>Large, slightly distorted, ventral valve.<br>Entire internal cast. Probably from Cattaraugus county.                                                                                                                                          |
| Delphi, N. Y.<br>Falls of Ohio River.<br>.....                                                         | Two exfoliated individuals.<br>As <i>Athyris vittata</i> H. Indiv. cut to show central portion of spires.<br>As <i>Atrypa polita</i> .                                                                                                                                                                                |
| Jasper, N. Y.                                                                                          | Two individuals, considerably exfoliated.                                                                                                                                                                                                                                                                             |
| Steuben Co., N. Y.<br>.....<br>18 Mile Creek, N. Y.                                                    | Entire internal cast.<br>As <i>Atrypa concentrica</i> Bronn.<br>" <i>Spirigera spiriferoides</i> . Large, entire. From the lake shore.                                                                                                                                                                                |
| Seneca Lake, N. Y.<br>Moscow, N. Y.                                                                    | Two entire individuals. From "Baileytown."<br>A small, gibbous individual.                                                                                                                                                                                                                                            |
| 18 Mile Creek, N. Y.                                                                                   | Two large individuals and one of medium size. The last is "from the lake shore."                                                                                                                                                                                                                                      |
| Darien, N. Y.                                                                                          | A ventral valve of medium size.                                                                                                                                                                                                                                                                                       |
| Hardy Co., Va.                                                                                         | Internal cast of conjoined valves.                                                                                                                                                                                                                                                                                    |
| 18 Mile Creek, N. Y.<br>Darien, N. Y.                                                                  | An individual cut down from both sides to show the spires.<br>Sections from the middle portions of three individuals from which the diagram was constructed.                                                                                                                                                          |
| Falls of Ohio River.<br>.....                                                                          | Entire, partly siliceous. See also <i>Athyris fultonensis</i> .<br>See <i>Atrypa reticularis</i> .                                                                                                                                                                                                                    |
| Independence, Ia.<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>Near Elmira, N. Y. | Entire.<br>See <i>Trigleria lepida</i> .<br>" <i>Athyris spiriferoides</i> .<br>" <i>Nucleospira concinna</i> .<br>" <i>Camarotæchia contracta</i> .<br>" <i>Atrypa reticularis</i> .<br>" <i>Comarotæchia eximia</i> .<br>" <i>Parazyga hirsuta</i> .<br>External imprint ventral valve incomplete along hinge line. |
| Near Bath, N. Y.<br>Bath, N. Y.                                                                        | External imprint of ventral valve.<br>" " " " "                                                                                                                                                                                                                                                                       |
| The Helderbergs, N. Y.<br>" "<br>" "<br>.....<br>.....<br>.....                                        | Large individual retaining most of shell.<br>Imprint of interior of dorsal valve.<br>Internal cast retaining ventral valve.<br>See <i>Camarotæchia contracta</i> .<br>" <i>Leiorhynchus mesacostale</i> .<br>" <i>Athyris polita</i> .                                                                                |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.          | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                  | REFERENCE.   |          |       |         |                |
|---------------|-------------------|--------------------|-------------------------------------------------------------|--------------|----------|-------|---------|----------------|
|               |                   |                    |                                                             | Work.        | Vol.     | P.    | Pl.     | Figs.          |
| U. H.         | <u>3077</u><br>1  | Type.              | <b>Atrypa</b> Dalman—Continued.<br>pseudomarginalis...Hall. | N. Y. S. M.  | 13       | 84    |         |                |
|               |                   |                    | "                                                           | Pal. N. Y.   | 4        | 327   | 53      | 1, 2           |
|               |                   |                    | H. & C.                                                     | "            | 8, pt. 2 | 173   | 55      | 26, 27         |
| Tully.        | <u>1536</u><br>29 | Fig'd.             | reticularis (Linn.)...Hall.                                 | Geol. N. Y.  | 4th D.   | 216   | ct. 92  | 4, ext.        |
| Ham.          | <u>1536</u><br>30 | "                  | " " Whitf.                                                  | N. Y. S. M.  | 20       | 141   | 1       | 4, int.        |
| U. H.         | <u>1536</u><br>18 | "                  | " " ..Hall.                                                 | Pal. N. Y.   | 4        | 316   | 51      | 10, d. v.      |
| "             | <u>1536</u><br>22 | "                  | " " ..                                                      | "            | 4        | 316   | 51      | 14-16          |
| Ham.          | <u>1536</u><br>30 | "                  | " " ..                                                      | "            | 4        | 316   | 51      | 17-22          |
| "             | "                 | "                  | " " ..                                                      | "            | 4        | 316   | 52      | 1-3            |
| "             | <u>1536</u><br>31 | "                  | " " ..                                                      | "            | 4        | 316   | 51      | 23, 24         |
| U. H.         | <u>1536</u><br>19 | "                  | " " ..                                                      | "            | 4        | 316   | 52      | 4-6            |
| "             | "                 | "                  | " " ..                                                      | "            | 4        | 316   | 52      | 7-9            |
| "             | "                 | "                  | " " ..                                                      | "            | 4        | 316   | 52      | 10, 11         |
|               |                   |                    | " " ..                                                      | "            | 4        | 316   | 52      | 12, int. v. v. |
| Ham.          | <u>1536</u><br>32 | "                  | " " H. & C.                                                 | "            | 8, pt. 2 | 166   | 55      | 9, " "         |
|               |                   |                    | " " ..Hall.                                                 | "            | 4        | 316   | 53      | 5-8            |
|               |                   |                    | " " H. & C.                                                 | St. G. N. Y. | 13       | ....  | 41      | 9, d. v.       |
| "             | <u>1536</u><br>33 | "                  | " " ..Hall.                                                 | Pal. N. Y.   | 8, pt. 2 | 166   | 55      | 5, 6           |
|               |                   |                    | " " H. & C.                                                 | "            | 4        | 316   | 53      | 9, int. d. v.  |
|               |                   |                    | " " ..                                                      | St. G. N. Y. | 13       | ....  | 41      | 11, " "        |
| "             | <u>1536</u><br>34 | "                  | " " ..Hall.                                                 | Pal. N. Y.   | 8, pt. 2 | 166   | 55      | 8, " "         |
| "             | <u>1536</u><br>35 | "                  | " " ..                                                      | "            | 4        | 316   | 53      | 14, 15         |
| Chem.         | <u>1536</u><br>36 | "                  | " " ..                                                      | "            | 4        | 316   | 53      | 16, v. v.      |
|               |                   |                    | " " ..                                                      | Geol. N. Y.  | 4th D.   | 272   | ct. 124 | 3              |
| "             | <u>1536</u><br>37 | "                  | " " ..                                                      | Pal. N. Y.   | 4        | 316   | 53      | 17, 18         |
| Ham.          | <u>1536</u><br>34 | "                  | " " ..                                                      | "            | 4        | 316   | 53      | 19, int. v. v. |
| Chem          | <u>1536</u><br>38 | "                  | " " ..                                                      | Geol. Ia.    | 1, pt. 2 | 515   | 6       | 4, 5           |
| "             | <u>1536</u><br>39 | "                  | " " ..                                                      | Geol. N. Y.  | 4th D.   | 272   | ct. 124 | 1a             |
|               |                   |                    | " " ..                                                      | "            | 4th D.   | 272   | ct. 124 | 3b             |
| Ham.          | <u>3075</u><br>10 | Type.              | spinosa .....Hall.                                          | "            | 4th D.   | 200   | ct. 80  | 2, ext. v. v.  |
|               |                   |                    | "                                                           | Pal. N. Y.   | 4        | 322   | 53A     | 9, " "         |
|               |                   |                    | " H. & C.                                                   | St. G. N. Y. | 13       | ....  | 41      | 14, " "        |
|               |                   |                    | "                                                           | Pal. N. Y.   | 8, pt. 2 | 78    | 55      | 21, " "        |
| U. H.         | <u>3075</u><br>2  | "                  | " .....Hall.                                                | "            | 4        | 322   | 53A     | 2-4            |
| "             | <u>3075</u><br>3  | "                  | " ....."                                                    | "            | 4        | 322   | 53A     | 5              |
| Ham.          | <u>3075</u><br>11 | "                  | " ....."                                                    | "            | 4        | 322   | 53A     | 6, 7           |
| "             | <u>3075</u><br>12 | "                  | " ....."                                                    | "            | 4        | 322   | 53A     | 10-12          |
| "             | <u>3075</u><br>13 | "                  | " ....."                                                    | "            | 4        | 322   | 53A     | 14, int. v. v. |
| Chem.         | <u>3075</u><br>14 | "                  | " ....."                                                    | "            | 4        | 322   | 53A     | 18, int. d. v. |
|               |                   |                    | tenuilineata .....                                          | .....        | .....    | ..... | .....   | .....          |
|               |                   |                    | tribulis .....                                              | .....        | .....    | ..... | .....   | .....          |
|               |                   |                    | sp. indet. ....                                             | Geol. N. Y.  | 4th D.   | ....  | t. 66   | 3              |
|               |                   |                    | <b>Barroisella</b> H. & C.                                  |              |          |       |         |                |
| Gen. ?        | <u>4516</u><br>1  | Fig'd Sp and G. T. | subspatulata (M. & W.)                                      |              |          |       |         |                |
|               |                   |                    | " H. & C.                                                   | St. G. N. Y. | 11       | 231   | 1       | 14, enl. X 5   |
|               |                   |                    | "                                                           | Pal. N. Y.   | 8, pt. 1 | 63    | 2       | 14, 15         |
| "             | "                 | "                  | " " "                                                       | "            | 8, pt. 1 | 63    | 2       | 16, int. d. v. |
|               |                   |                    | <b>Beachia</b> Hall & Clarke.....                           | .....        | .....    | ..... | .....   | .....          |
| Orisk.        | <u>2743</u><br>1  | Gen. and Sp. Type. | Suessana .....Hall.                                         | N. Y. S. M.  | 10       | 100   | .....   | .....          |
|               |                   |                    | "                                                           | Pal. N. Y.   | 3        | 459   | 107     | 7              |
|               |                   |                    | " H. & C.                                                   | "            | 8, pt. 2 | 260   | 77      | 1              |



| LOCALITY.                                                                                                                                                          | REMARKS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Schoharie, N. Y.<br>Bellona, N. Y.                                                                                                                                 | An entire individual.<br>External imprint of a ventral valve preserving the long fimbriæ.<br>Retains some shell.                                                                                                                                                                                                                                                                                                                                                                                               |
| Falls of Ohio River.<br>Williamsville, N. Y.<br>Clarence Hollow, N. Y.                                                                                             | Individ. from wh. the vent. valve has been removed to show spires.<br>A small, exfoliated dorsal valve, imbedded.<br>Exfoliated individ. from which the vent. valve has been removed.                                                                                                                                                                                                                                                                                                                          |
| Falls of Ohio River.<br>" " "<br>The Bake-Oven, Ill.<br>Onondaga Co., N. Y.<br>" " "<br>" " "                                                                      | One small and two large, entire individuals.<br>Separated valves of same individual, silicified.<br>Entire, somewhat exfoliated.<br>Siliceous casts of two large individuals.<br>A large individual, somewhat exfoliated, and a ventral valve.<br><br>An individual from which the ventral valve has been removed.                                                                                                                                                                                             |
| Moscow, N. Y.                                                                                                                                                      | Two entire individuals.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 18 Mile Creek, N. Y.<br>Independence, Ia.<br>Waverly, Ia.<br>.....<br>Western New York.<br>Cortland, N. Y.<br>Independence, Ia.<br>Elmira, N. Y.<br>Ithaca, N. Y.  | A somewhat broken dorsal valve. From the lake shore.<br>A very large individual.<br>Large ventral valve, imbedded.<br>As type of <i>Atrypa tribulis</i> .<br>A nearly entire invid. and the external imprint of a ventral valve.<br>Internal imprint of a ventral valve.<br>One very large and two small individuals.<br>As type of <i>Atrypa dumosa</i> . Imperfect cast retaining some spires.<br>As type of <i>Atrypa tribulis</i> . Imperfect internal cast of a ventral valve. From the "Inclined Plane." |
| Moscow, N. Y.<br>Erie Co., N. Y.<br>Near Batavia, N. Y.<br>Falls of Ohio River.<br>Darien, N. Y.<br>Moscow, N. Y.<br>Near Elmira, N. Y.<br>.....<br>.....<br>..... | Rather flat individual, preserving spinules.<br>Entire. As <i>A. spinosa</i> vel <i>aspera</i> Schlotheim in the text.<br>Rather smooth individual. Entered in text like preceding.<br>A silicified vent. valve and a dorsal valve with imperfect margin.<br>An average individual denuded of spinules.<br>A large ventral valve.<br>Internal cast of a dorsal valve.<br>See <i>Schizophoria tioga</i> .<br>" <i>Atrypa reticularis</i> .<br>" <i>Camarotoechia contracta</i> .                                |
| E. of Sandusky, O.<br>" " "<br>.....<br>.....<br>.....<br>Cumberland, Md.                                                                                          | An imbedded ventral valve and the internal imprint of another.<br>From the "Black Slate."<br>Fragmentary dorsal valve showing interior, imbedded. From the<br>"Black Slate."<br>Defined as a subgenus of <i>Rensselæria</i> .<br>As <i>Meganteris Suessana</i> .<br>" <i>Rensselæria Suessana</i> . The lower figure.<br>Entire internal cast, silicified. The lower figure.                                                                                                                                   |

## Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.    | REFERENCE.   |          |      |       |                       |
|---------------|------------------|--------------------|-------------------------------|--------------|----------|------|-------|-----------------------|
|               |                  |                    |                               | Work.        | Vol.     | P.   | Pl.   | Figs.                 |
| Orisk.        | $\frac{2743}{1}$ | Gen. and Sp. Type. | <b>Beachia</b> H. & C.—Cont.  |              |          |      |       |                       |
|               |                  |                    | Suessana . . . . . Hall.      | Pal. N. Y.   | 3        | 459  | 107   | 9, 10                 |
|               |                  |                    | H. & C.                       | St. G. N. Y. | 13       | 850  | 51    | 6, <i>int. d. v.</i>  |
|               |                  |                    | "                             | Pal. N. Y.   | 8, pt. 2 | 260  | 77    | 2, " "                |
|               |                  |                    | " . . . . . Hall.             | "            | 3        | 459  | 107   | 1-5h                  |
|               |                  |                    | H. & C.                       | St. G. N. Y. | 13       | 850  | 51    | 1-4                   |
| "             | "                | "                  | "                             | Pal. N. Y.   | 8, pt. 2 | 260  | 77    | 3, 6-9.               |
|               |                  |                    | " . . . . . Hall.             | "            | 3        | 459  | 107   | 8, <i>int. d. v.</i>  |
|               |                  |                    | H. & C.                       | "            | 8, pt. 2 | 260  | 77    | 5, " "                |
| U. H.         | $\frac{3081}{2}$ | Type.              | <b>Camarotoechia</b> H. & C.  |              |          |      |       |                       |
|               |                  |                    | Billingsi . . . . . Hall.     | "            | 4        | 336  | 54    | 9, 11-13              |
|               |                  |                    | " . . . . . " H. & C.         | "            | 4        | 336  | 54    | 10, <i>ent. X 2</i>   |
| Ham.          | $\frac{4517}{1}$ | Fig'd Sp and G.T.  | congregata (Con.) . . . Hall. | "            | 8, pt. 2 | 192  | 57    | 3, " "                |
|               |                  |                    | " " " " " " " " " "           | "            | 4        | 341  | 54    | 44, 45                |
|               |                  |                    | " " " " " " " " " "           | "            | 4        | 341  | 54    | 51, <i>int. v. v.</i> |
| "             | $\frac{4517}{2}$ | "                  | " " " " " " " " " "           | "            | 8, pt. 2 | 190  | 57    | 22, " "               |
|               |                  |                    | " " " " " " " " " "           | "            | 4        | 341  | 54    | 52-54                 |
|               |                  |                    | " " " " " " " " " "           | "            | 4        | 341  | 54    | 9                     |
| U. H.         | $\frac{4197}{1}$ | Type.              | carolina . . . . . Hall.      | St. G. N. Y. | 13       | 826  | 43    | 20, 21                |
|               |                  |                    | H. & C.                       | Pal. N. Y.   | 8, pt. 2 | 190  | 57    | 14-19                 |
|               |                  |                    | " " " " " " " " " "           | "            | 8, pt. 2 | 192  | 57    | 4-6                   |
| Chem.         | $\frac{4518}{1}$ | "                  | contracta . . . . . Hall.     | "            | 4        | 351  | 55    | 3a, <i>v. v.</i>      |
|               |                  |                    | " " " " " " " " " "           | Geol. N. Y.  | 4th D.   | .... | t. 66 | 26, " "               |
|               |                  |                    | " " " " " " " " " "           | Pal. N. Y.   | 4        | 351  | 55    | 29-33                 |
| "             | $\frac{4518}{2}$ | "                  | " " " " " " " " " "           | "            | 4        | 351  | 55    | 28, 29, 31            |
|               |                  |                    | " " " " " " " " " "           | "            | 8, pt. 2 | 192  | 57    | 36, <i>v. v.</i>      |
|               |                  |                    | " " " " " " " " " "           | "            | 4        | 351  | 55    | 37, <i>int. v. v.</i> |
| "             | $\frac{4518}{3}$ | "                  | " " " " " " " " " "           | "            | 4        | 351  | 55    | 1a, d,                |
|               |                  |                    | " " " " " " " " " "           | Geol. N. Y.  | 4th D.   | .... | t. 66 | 1c, <i>v. v.</i>      |
|               |                  |                    | " " " " " " " " " "           | "            | 4th D.   | .... | t. 66 | 3, <i>d. v.</i>       |
| "             | $\frac{4518}{4}$ | "                  | " " " " " " " " " "           | "            | 4th D.   | .... | t. 66 | 44-49                 |
|               |                  |                    | " " " " " " " " " "           | "            | 4th D.   | .... | t. 66 | 11-14                 |
|               |                  |                    | " " " " " " " " " "           | "            | 4th D.   | .... | t. 66 | 15-18                 |
| U. H.         | $\frac{4520}{1}$ | "                  | dotis . . . . . Hall.         | "            | 4        | 344  | 54A   | 40, 41                |
|               |                  |                    | " " " " " " " " " "           | "            | 4        | 344  | 54A   | 19, 20                |
|               |                  |                    | " " " " " " " " " "           | "            | 8, pt. 2 | 192  | 57    | 2-2b                  |
| Chem.         | $\frac{4520}{2}$ | "                  | contracta . . . . . Hall.     | Geol. N. Y.  | 4th D.   | .... | t. 67 | 17-20                 |
|               |                  |                    | " " " " " " " " " "           | Pal. N. Y.   | 4        | 350  | 55    | 36-38                 |
|               |                  |                    | " " " " " " " " " "           | "            | 8, pt. 2 | 192  | 57    | 4a, <i>v. v.</i>      |
| "             | $\frac{4521}{1}$ | "                  | eximia . . . . . Hall.        | Geol. N. Y.  | 4th D.   | .... | t. 66 | 4-8                   |
|               |                  |                    | " " " " " " " " " "           | Pal. N. Y.   | 4        | 348  | 55    | 44, 45                |
|               |                  |                    | " " " " " " " " " "           | "            | 8, pt. 2 | 192  | 57    | 1-3                   |
| "             | $\frac{4522}{1}$ | "                  | " " " " " " " " " "           | "            | 4        | 348  | 55    | 50, 51                |
|               |                  |                    | " " " " " " " " " "           | "            | 4        | .... | 54A   | 28-32                 |
|               |                  |                    | " " " " " " " " " "           | "            | 8, pt. 2 | 192  | 57    | 7-9                   |
| Ham.          | $\frac{4523}{1}$ | Type.              | Horsfordi . . . . . Hall.     | N. Y. S. M.  | 13       | 87   | ....  | ....                  |
|               |                  |                    | " " " " " " " " " "           | Pal. N. Y.   | 4        | 339  | 54    | 24, <i>d. v.</i>      |
|               |                  |                    | " " " " " " " " " "           | "            | 4        | 339  | 54    | 25-27                 |
| "             | $\frac{4523}{2}$ | "                  | " " " " " " " " " "           | "            | 4        | 339  | 54    | 28-32                 |
|               |                  |                    | " " " " " " " " " "           | "            | 4        | 339  | 54    | 7-9                   |
|               |                  |                    | " " " " " " " " " "           | "            | 8, pt. 2 | 192  | 57    | ....                  |
| Chem.         | $\frac{4524}{1}$ | "                  | orbicularis . . . . . Hall.   | N. Y. S. M.  | 14       | 88   | ....  | ....                  |
|               |                  |                    | " " " " " " " " " "           | Pal. N. Y.   | 4        | 353  | 55    | 43, 44                |
|               |                  |                    | " " " " " " " " " "           | St. G. N. Y. | 13       | .... | 43    | 8                     |
| "             | $\frac{4524}{2}$ | "                  | " " " " " " " " " "           | Pal. N. Y.   | 8, pt. 2 | 192  | 57    | 47, 48                |
|               |                  |                    | " " " " " " " " " "           | "            | 4        | 353  | 55    | ....                  |
|               |                  |                    | " " " " " " " " " "           | "            | 8, pt. 2 | 192  | 57    | ....                  |



| LOCALITY.                                  | REMARKS.                                                                                                                                                                                               |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                                      | As <i>Rensselæria Suessana</i> .                                                                                                                                                                       |
| Cumberland, Md.<br>.....                   | Two silicified specimens showing the interior of the dorsal valve.<br>As <i>Rensselæria Suessana</i> .                                                                                                 |
| Cumberland, Md.<br>.....                   | Seven silicified individuals.<br>As <i>Rensselæria Suessana</i> .                                                                                                                                      |
| Cumberland, Md.                            | Two fragmentary dorsal valves, silicified.                                                                                                                                                             |
| Ontario, Ont.                              | As <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>Billingsi</i> . Entire individual. The locality is now called Winona.                                                                                |
| .....                                      | As <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>Billingsi</i> .                                                                                                                                      |
| Near Louisville, Ky.                       | Internal siliceous cast. From the collection of Dr. Knapp.                                                                                                                                             |
| Near Hamilton, N. Y.                       | As <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>congregata</i> . Exfoliated individual.                                                                                                              |
| Otsego Co., N. Y.<br>.....                 | Internal cast of a rather large ventral valve.<br>As <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>congregata</i> .                                                                                   |
| Otsego Co., N. Y.<br>.....                 | Two entire internal casts of conjoined valves.<br>As <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>carolina</i> .                                                                                     |
| Near Columbus, O.                          | Two entire internal casts, siliceous.                                                                                                                                                                  |
| Belmont, N. Y.                             | As <i>Atrypa contracta</i> . Cast, imbedded.                                                                                                                                                           |
| Chenango Tp., N. Y.<br>.....               | As <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>contracta</i> . Cast, imbedded.<br>" " " "                                                                                                           |
| Ithaca, N. Y.                              | Entire internal cast.                                                                                                                                                                                  |
| Chautauqua Crk., N. Y.                     | As <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>contracta</i> . Cast imbedded.                                                                                                                       |
| Chautauqua Co., N. Y.                      | " " " " Int. cast ventral valve.                                                                                                                                                                       |
| Steuben Co., N. Y.                         | As <i>Atrypa laticostata</i> Phillips. Casts of the opposite valves in separate blocks from the southern part of the county.                                                                           |
| Ithaca, N. Y.                              | As <i>Atrypa laticostata</i> Phillips. Imbedded cast from Fall Creek.                                                                                                                                  |
| Nr. Friendship, N. Y.                      | As <i>Atrypa</i> sp. Internal cast, imbedded. From Rockville.                                                                                                                                          |
| Rockford, Ia.                              | As <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>contracta</i> (?) var. <i>saxatilis</i> . Two individuals.                                                                                           |
| Pavilion, N. Y.<br>.....                   | As <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>dotis</i> . Exfoliated individual.<br>" " " "                                                                                                        |
| 18 Mile Creek, N. Y.                       | A well preserved adult.                                                                                                                                                                                |
| Otsego Co., N. Y.                          | As <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>dotis</i> . Cast of a gibbous individual.                                                                                                            |
| E. Jamestown, N. Y.<br>.....               | As <i>Atrypa duplicata</i> . An exfoliated individual and a block, part of which was figured. Local, formerly called Dexterville.<br>As <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>duplicata</i> . |
| E. Jamestown, N. Y.<br>.....               | A considerably exfoliated individual.<br>As <i>Atrypa eximia</i> .                                                                                                                                     |
| .....                                      | " <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>eximia</i> .                                                                                                                                          |
| Allegany Co., N. Y.                        | Entire internal cast. From White Creek.                                                                                                                                                                |
| Near Ithaca, N. Y.                         | As <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>eximia</i> . An entire internal cast and the casts of the opposite valves. All retain some shell.                                                    |
| Rockford, Ia.                              | As <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>contracta</i> (?) var. <i>saxatilis</i> Hall. Small individual.                                                                                      |
| .....                                      | As <i>Rhynchonella</i> <i>Horsfordi</i> .                                                                                                                                                              |
| Falls of Ohio River.                       | " " ( <i>Stenoschisma</i> ) <i>Horsfordi</i> . A silicified individual.                                                                                                                                |
| Canandaigua or Seneca Lake, N. Y.<br>..... | " " " " Two individuals.<br>As <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>Horsfordi</i> .                                                                                                          |
| Canandaigua L., N. Y.<br>.....             | Entire individual.<br>As <i>Rhynchonella</i> <i>orbicularis</i> .                                                                                                                                      |
| .....                                      | " " ( <i>Stenoschisma</i> ) <i>orbicularis</i> .                                                                                                                                                       |
| Meadville, Pa.                             | Two nearly entire internal casts.                                                                                                                                                                      |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                | REFERENCE.         |          |      |        |                     |
|---------------|------------------|-------------------|-------------------------------------------|--------------------|----------|------|--------|---------------------|
|               |                  |                   |                                           | Work.              | Vol.     | P.   | Pl.    | Figs.               |
| Chem. Ham.    | $\frac{4524}{5}$ | Type.             | <b>Camarotoechia</b> H. & C.— <i>Con.</i> |                    |          |      |        |                     |
|               | $\frac{4525}{1}$ | "                 | orbicularis.....Hall.                     | Pal. N. Y.         | 4        | 353  | 55     | 45, <i>int.d.v.</i> |
| U. H. Mar.    | $\frac{3080}{1}$ | "                 | prolifera.....Hall.                       | " "                | 4        | 343  | 54A    | 1-10                |
|               | $\frac{4382}{1}$ | "                 | H. & C. royana.....Hall.                  | " "                | 8, pt. 2 | 192  | 57     | 42, 43              |
| Ham. Chem.    | $\frac{4382}{2}$ | "                 | sappho.....Hall.                          | " "                | 4        | 338  | 54     | 20-23               |
|               | $\frac{4525}{1}$ | "                 | ".....Hall.                               | N. Y. S. M.        | 13       | 87   | ....   | ....                |
| Ham. Chem.    | $\frac{4382}{2}$ | "                 | ".....Hall.                               | Pal. N. Y.         | 4        | 340  | 54     | 34-42               |
|               | $\frac{4525}{1}$ | "                 | H. & C. ".....Hall.                       | " "                | 8, pt. 2 | 192  | 57     | 10-14               |
| " "           | $\frac{4525}{2}$ | "                 | Stevensi.....Hall.                        | " "                | 4        | 340  | 54     | 43, <i>frt.</i>     |
|               |                  | "                 | ".....Hall.                               | " "                | 4        | 349  | 55     | 9, <i>ext.v.v.</i>  |
| U. H.         | $\frac{3086}{1}$ | "                 | ".....H. & C.                             | " "                | 4        | 349  | 55     | 10, <i>int.v.v.</i> |
|               |                  | "                 | Centronella Billings.                     | " "                | 8, pt. 2 | 192  | 57     | 33, "               |
| Scho.         | $\frac{2838}{1}$ | Gen. and Sp. Type | alveata.....Hall.                         | N. Y. S. M.        | 10       | 124  | ....   | ....                |
|               |                  |                   | ".....H. & C.                             | Pal. N. Y.         | 4        | 401  | 61A    | 22-24               |
| U. H.         | $\frac{3085}{1}$ | Type.             | glans-fagea.....Hall.                     | " "                | 8, pt. 2 | 268  | 79     | 22-24               |
|               | $\frac{4204}{1}$ | "                 | Billings.                                 | N. Y. S. M.        | 10       | 125  | ....   | ....                |
| Ham.          | $\frac{4526}{1}$ | "                 | Hall.                                     | Can. N. & G.       | 4        | 132  | ....   | ....                |
|               | $\frac{4527}{1}$ | "                 | ".....H. & C.                             | N. Y. S. M.        | 16       | 45   | ....   | ....                |
| " "           | $\frac{4528}{1}$ | "                 | ".....Hall.                               | Pal. N. Y.         | 4        | 399  | 61A    | 1, 2                |
|               |                  | "                 | impressa.....Hall.                        | " "                | 8, pt. 2 | 268  | 79     | 1, <i>d. v.</i>     |
| U. H.         | $\frac{3046}{1}$ | "                 | ".....Hall.                               | " "                | 4        | 399  | 61A    | 8-10                |
|               |                  | "                 | ".....H. & C.                             | " "                | 4        | 399  | 61A    | 25, 26              |
| Ham.          | $\frac{4526}{1}$ | "                 | ".....Hall.                               | " "                | 8, pt. 2 | 268  | 79     | 5, 6                |
|               | $\frac{4527}{1}$ | "                 | impressa.....Hall.                        | " "                | 4        | 399  | 61A    | 6, <i>d. v.</i>     |
| " "           | $\frac{4528}{1}$ | "                 | ".....Hall.                               | N. Y. S. M.        | 14       | 102  | ....   | ....                |
|               |                  | "                 | ".....H. & C.                             | " "                | 15       | .... | 3      | 1-5                 |
| U. H.         | $\frac{3049}{2}$ | "                 | glaucia.....Hall.                         | Pal. N. Y.         | 4        | 402  | 61A    | 33-38               |
|               |                  | "                 | Chonetes Fischer.                         | " "                | 8, pt. 2 | 269  | 79     | 16, 18-20           |
| Ham.          | $\frac{4531}{1}$ | Fig'd.            | acutiradiatus.....Hall.                   | " "                | 4        | 403  | 61A    | 39, 40              |
|               |                  | "                 | ".....H. & C.                             | Geol. N. Y.        | 4th D.   | 171  | ct. 67 | 3, <i>ext.v.v.</i>  |
| " "           | $\frac{3049}{2}$ | "                 | arcuatus.....Hall.                        | Pal. N. Y.         | 4        | 120  | 20     | 5a-c                |
|               |                  | "                 | ".....H. & C.                             | St. G. N. Y.       | 2        | .... | 47     | 8, <i>ext.v.v.</i>  |
| " "           | $\frac{3049}{1}$ | "                 | ".....Hall.                               | " "                | 11       | .... | 20     | 4, "                |
|               |                  | "                 | ".....H. & C.                             | Pal. N. Y.         | 8, pt. 1 | .... | 16     | 8, "                |
| Ham.          | $\frac{4532}{1}$ | Type.             | complanatus.....Hall.                     | N. Y. S. M.        | 10       | 116  | ....   | ....                |
|               |                  | "                 | coronatus (Con.).....Hall.                | Pal. N. Y.         | 4        | 119  | 20     | 7a-d                |
| " "           | $\frac{4532}{2}$ | "                 | ".....H. & C.                             | Pal. N. Y.         | 4        | 119  | 20     | 7a-d                |
|               |                  | "                 | ".....Hall.                               | St. G. N. Y.       | 2        | .... | 47     | 15                  |
| " "           | $\frac{4532}{1}$ | "                 | deflectus.....Hall.                       | H. & C. Pal. N. Y. | 8, pt. 1 | .... | 16     | 15                  |
|               |                  | "                 | ".....H. & C.                             | " "                | 4        | 119  | 20     | 7e, f               |
| " "           | $\frac{4532}{2}$ | "                 | ".....Hall.                               | St. G. N. Y.       | 2        | .... | 47     | 35, 36              |
|               |                  | "                 | ".....H. & C.                             | Pal. N. Y.         | 8, pt. 1 | .... | 16     | 35, 36              |
| Ham.          | $\frac{4531}{1}$ | Fig'd.            | complanatus.....Hall.                     | " "                | 4        | 133  | 21     | 10a-d, h, i         |
|               |                  | "                 | coronatus (Con.).....Hall.                | Pal. N. Y.         | 4        | 133  | 21     | 10a-d, h, i         |
| " "           | $\frac{4532}{1}$ | Type.             | ".....H. & C.                             | St. G. N. Y.       | 2        | .... | 47     | 33, <i>int.d.v.</i> |
|               |                  | "                 | ".....Hall.                               | Pal. N. Y.         | 8, pt. 1 | 313  | 16     | 33, "               |
| " "           | $\frac{4532}{2}$ | "                 | deflectus.....Hall.                       | N. Y. S. M.        | 10       | 149  | ....   | ....                |
|               |                  | "                 | ".....H. & C.                             | Pal. N. Y.         | 4        | 126  | 21     | 7a-g                |
| " "           | $\frac{4532}{1}$ | "                 | ".....Hall.                               | St. G. N. Y.       | 2        | .... | 47     | 28, <i>int.d.v.</i> |
|               |                  | "                 | ".....H. & C.                             | " "                | 11       | .... | 20     | 11, "               |
| " "           | $\frac{4532}{2}$ | "                 | ".....Hall.                               | Pal. N. Y.         | 8, pt. 1 | .... | 16     | 28, "               |
|               |                  | "                 | ".....Hall.                               | N. Y. S. M.        | 10       | 145  | ....   | ....                |
| " "           | $\frac{4532}{2}$ | "                 | ".....Hall.                               | Pal. N. Y.         | 4        | 126  | 21     | 8b, c               |
|               |                  | "                 | gibbosus.....Hall.                        | " "                | ....     | .... | ....   | ....                |
|               |                  | "                 | glaber.....Hall.                          | " "                | ....     | .... | ....   | ....                |



| LOCALITY.             | REMARKS.                                                                                                         |
|-----------------------|------------------------------------------------------------------------------------------------------------------|
| Howard, N. Y.         | Internal cast of a dorsal valve.                                                                                 |
| .....                 | As <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>prolifca</i> .                                                 |
| Otsego, N. Y.         | Five entire internal casts.                                                                                      |
| Near LeRoy, N. Y.     | As <i>Rhynchonella</i> ? ( <i>Stenoschisma</i> ?) <i>royana</i> . Entire, silicified.                            |
| .....                 | “ <i>Rhynchonella sappho</i> .                                                                                   |
| .....                 | “ “ ( <i>Stenoschisma</i> ) <i>sappho</i> .                                                                      |
| LeRoy, N. Y.          | Seven individuals, of which four were figured.                                                                   |
| Madison Co., N. Y.    | As <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>sappho</i> . A large, gibbous individ.                         |
| Belmont, N. Y.        | As type of <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>Stephani</i> . Ventral valve, imbedded.                |
| .....                 | As type of <i>Rhynchonella</i> ( <i>Stenoschisma</i> ) <i>Stephani</i> .                                         |
| Cortland Co., N. Y.   | Internal cast of a ventral valve.                                                                                |
| .....                 | As <i>Rhynchonella</i> (?) <i>alveata</i> .                                                                      |
| Western New York.     | A considerably exfoliated, somewhat imperfect individual.                                                        |
| .....                 | As <i>Rhynchonella glans-fagea</i> .                                                                             |
| .....                 | Made type of genus <i>Centronella</i> .                                                                          |
| Albany Co., N. Y.     | Individual with beak slightly broken.                                                                            |
| Clarence, N. Y.       | Entire. The figures are enlargements to two diameters.                                                           |
| Near Waterloo, Ia.    | Entire figures are enl. × 2. Specimen came from O. H. St. John.                                                  |
| The Bake-Oven, Ill.   | Internal cast retaining shell at the umbones.                                                                    |
| Bellona, N. Y.        | A very perfect adult, a ventral and two dorsal valves.                                                           |
| Schoharie Co., N. Y.  | Internal cast of ventral valve and a partial cast of a dorsal valve; imbedded; two blocks.                       |
| .....                 | As <i>Strophomena acutiradiata</i> .                                                                             |
| East Buffalo, N. Y.   | Two ventral valves imbedded together.                                                                            |
| Williamsville, N. Y.  | A nearly entire individual and two imbedded ventral valves.                                                      |
| Clarence Hollow, N.Y. | Internal cast of a ventral valve. See also <i>Chonetes hemisphericus</i> .                                       |
| .....                 | See <i>Chonostrophia complanatus</i> .                                                                           |
| Darien, N. Y.         | A small, entire individual and two ventral valves, one of which is imbedded. See also <i>Chonetes syrtalis</i> . |
| .....                 | Fig. an enl. × 2.                                                                                                |
| .....                 | “ “ “ “                                                                                                          |
| Canandaigua L., N. Y. | “ “ “ “ Two entire individs. and two opposite valves.                                                            |
| .....                 | As type of <i>Chonetes gibbosus</i> .                                                                            |
| York, N. Y.           | A very gibbous ventral valve, imbedded.                                                                          |
| .....                 | See <i>Chonetes deflectus</i> .                                                                                  |
| .....                 | “ “ <i>lineatus</i> .                                                                                            |

Class BRACHIOPODA—Continued.

| Geol.<br>Subdiv.              | Cat.<br>No.       | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.          | REFERENCE.   |          |       |        |                 |
|-------------------------------|-------------------|----------------------|-------------------------------------|--------------|----------|-------|--------|-----------------|
|                               |                   |                      |                                     | Work.        | Vol.     | P.    | Pl.    | Figs.           |
| <b>Chonetes Fischer—Cont.</b> |                   |                      |                                     |              |          |       |        |                 |
| U. H.                         | $\frac{2825}{2}$  | Type.                | hemisphericus.....Hall.             | N. Y. S. M.  | 10       | 116   |        |                 |
| Scho.                         | $\frac{2825}{1}$  | "                    | "                                   | Pal. N. Y.   | 4        | 118   | 20     | 6a, ext. v. v.  |
|                               |                   |                      | "                                   | N. Y. S. M.  | 10       | 116   | ....   | I, "            |
|                               |                   |                      | "                                   | Pal. N. Y.   | 4        | 118   | 20     | 6b-d            |
|                               |                   |                      | "                                   | St. G. N. Y. | 2        | ....  | 47     | 14, ext. v. v.  |
| Ham.                          | $\frac{4533}{1}$  | Fig'd.               | H. & C.<br>Koninckanus (N. & P.) H. | Pal. N. Y.   | 8, pt. I | ....  | 16     | 14, "           |
|                               |                   |                      | "                                   | "            | 4        | 136   | 21     | 3, "            |
| "                             | $\frac{4534}{1}$  | Type.                | laticosta.....                      | .....        | .....    | ..... | .....  | .....           |
|                               |                   |                      | lepidus.....Hall.                   | N. Y. S. M.  | 10       | 148   |        |                 |
| Chem.                         | $\frac{4534}{2}$  | "                    | "                                   | Pal. N. Y.   | 4        | 132   | 21     | 5a-e            |
|                               |                   |                      | "                                   | "            | 4        | 142   | 22     | 13, v. v.       |
| U. H.                         | $\frac{3043}{4}$  | Fig'd.               | lineatus (Con.).....Hall.           | N. Y. S. M.  | 10       | 117   | ....   | .....           |
|                               |                   |                      | "                                   | Pal. N. Y.   | 4        | 121   | 20     | 3a-f            |
| Tully.                        | $\frac{4535}{1}$  | Type.                | Logani var. aurora..Hall.           | "            | 4        | 137   | 22     | 16-18           |
|                               |                   |                      | "                                   | St. G. N. Y. | 2        | ....  | 47     | 9, 18           |
| Ham.                          | $\frac{4536}{1}$  | Fig'd.               | H. & C.<br>Maclurea (N. & P.) Hall. | Pal. N. Y.   | 8, pt. I | ....  | 16     | 9, 18           |
|                               |                   |                      | "                                   | "            | 4        | 136   | 21     | 11              |
| "                             | $\frac{4537}{1}$  | "                    | Martini (N. & P.)..Hall.            | "            | 4        | 136   | 21     | 12              |
| Mar.                          | $\frac{3044}{11}$ | Type.                | mucronatus.....Hall.                | Geol. N. Y.  | 4th D    | 181   | ct. 71 | 3               |
|                               |                   |                      | "                                   | N. Y. S. M.  | 10       | 119   | ....   | .....           |
| "                             | $\frac{3044}{2}$  | "                    | "                                   | Pal. N. Y.   | 4        | 124   | 20     | 1a-d            |
|                               |                   |                      | "                                   | N. Y. S. M.  | 10       | 119   | ....   | .....           |
| "                             | $\frac{3044}{3}$  | "                    | "                                   | Pal. N. Y.   | 4        | 124   | 20     | 2, v. v. X 2    |
|                               |                   |                      | "                                   | St. G. N. Y. | 2        | ....  | 47     | 6, "            |
| Mar.                          | $\frac{3044}{9}$  | "                    | H. & C.<br>".....Hall.              | Pal. N. Y.   | 8, pt. I | 306   | 16     | 6, "            |
|                               |                   |                      | "                                   | N. Y. S. M.  | 10       | 119   | ....   | .....           |
| Chem.                         | $\frac{4538}{1}$  | "                    | "                                   | Pal. N. Y.   | 4        | 124   | 21     | 1a-c            |
|                               |                   |                      | "                                   | "            | 4        | 143   | 22     | 31, ext. d. v.  |
| Ham.                          | $\frac{4539}{1}$  | "                    | muricatus.....Hall.                 | N. Y. S. M.  | 10       | 149   |        |                 |
|                               |                   |                      | pusillus.....Hall.                  | Pal. N. Y.   | 4        | 128   | 21     | 6a, b           |
| "                             | $\frac{4540}{1}$  | "                    | scitulus.....Hall.                  | N. Y. S. M.  | 10       | 147   |        |                 |
|                               |                   |                      | "                                   | Pal. N. Y.   | 4        | 130   | 21     | 4a, b, d        |
| "                             |                   | "                    | "                                   | St. G. N. Y. | 2        | ....  | 47     | 4, d. v.        |
|                               |                   |                      | "                                   | Pal. N. Y.   | 8, pt. I | ....  | 16     | 4, "            |
| "                             | $\frac{4540}{3}$  | "                    | "                                   | "            | 4        | 130   | 21     | 4c, ext. v. v.  |
|                               |                   |                      | "                                   | "            | 4        | 130   | 21     | 4f, int. d. v.  |
| "                             |                   | "                    | "                                   | St. G. N. Y. | 2        | ....  | 47     | 27, "           |
|                               |                   |                      | "                                   | Pal. N. Y.   | 8, pt. I | ....  | 16     | 27, "           |
| Chem.                         | $\frac{4540}{5}$  | "                    | "                                   | "            | 4        | 141   | 22     | 8, v. v.        |
| Ham.                          | $\frac{4540}{4}$  | "                    | "                                   | "            | 4        | 130   | 22     | 9, "            |
|                               |                   |                      | "                                   | "            | "        | "     | "      | "               |
| Mar.                          | $\frac{4375}{1}$  | "                    | setiger.....Hall.                   | Geol. N. Y.  | 4th D    | 180   | ct. 71 | 2, ext. v. v.   |
|                               |                   |                      | "                                   | N. Y. S. M.  | 10       | 150   |        |                 |
| "                             |                   | "                    | "                                   | Pal. N. Y.   | 4        | 129   | 21     | 2a, b           |
|                               |                   |                      | "                                   | St. G. N. Y. | 2        | ....  | 47     | 5, 19           |
| "                             |                   | "                    | H. & C.<br>"                        | "            | 11       | ....  | 20     | 2, v. v. X 2    |
|                               |                   |                      | "                                   | Pal. N. Y.   | 8, pt. I | ....  | 16     | 5, 19           |
| Chem.                         | $\frac{4375}{2}$  | "                    | "                                   | "            | 4        | 142   | 22     | 4, v. v. X 2    |
| Ham.                          | $\frac{4541}{1}$  | Fig'd.               | syrtalis (Con.).....Hall.           | "            | 4        | 135   | 21     | 13a, b          |
|                               |                   |                      | "                                   | St. G. N. Y. | 2        | ....  | 47     | 43, ext.        |
| "                             |                   | "                    | H. & C.<br>"                        | Pal. N. Y.   | 8, pt. I | ....  | 16     | 43, "           |
|                               |                   |                      | "                                   | "            | "        | "     | "      | "               |
| "                             |                   | "                    | "                                   | "            | 4        | 135   | 21     | 13c, int. d. v. |
|                               |                   |                      | "                                   | St. G. N. Y. | 2        | ....  | 47     | 41, "           |
| "                             |                   | "                    | H. & C.<br>"                        | Pal. N. Y.   | 8, pt. I | ....  | 16     | 41, "           |
|                               |                   |                      | "                                   | "            | "        | "     | "      | "               |



| LOCALITY.                     | REMARKS.                                                                                                                                        |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Western New York.             | A somewhat imperfect ventral valve, imbedded.                                                                                                   |
| .....                         | As <i>Chonetes arcuatus</i> , by error.                                                                                                         |
| Albany Co., N. Y.             | A ventral valve, imbedded.                                                                                                                      |
| 2 mi. West of Jonesboro, Ill. | Imb. Ident. by Norwood & Pratten, but= <i>Chonetes coronatus</i> Con.                                                                           |
| .....                         | See <i>Chonetes mucronatus</i> .                                                                                                                |
| Hamburg, N. Y.                | A large, entire individual and a dorsal valve.                                                                                                  |
| Forestville, N. Y.            | Ventral valve, imbedded.                                                                                                                        |
| .....                         | As type of <i>Chonetes glaber</i> Hall.                                                                                                         |
| Seneca Co., N. Y.             | Two ventral valves, one dorsal valve, one individual and an internal cast of ventr. valve; all imbedded. See also <i>Chonetes Yandellanus</i> . |
| De Ruyter, N. Y.              | Two specimens imbedded with many others.                                                                                                        |
| Devil's Backbone, Ill.        | Imbedded. Identified by Norwood & Pratten, but probably= <i>Chonetes cornutus</i> Con.                                                          |
| " "                           | Internal imprint retaining some shell. Identified by Norwood & Pratten, but probably= <i>Chonetes cornutus</i> Con.                             |
| Avon, N. Y.                   | As <i>Strophomena mucronata</i> . Ventral valve, imbedded.                                                                                      |
| .....                         | As type of <i>Chonetes laticosta</i> .                                                                                                          |
| Near Buffalo, N. Y.           | Two imbedded ventral valves.                                                                                                                    |
| .....                         | As type of <i>Chonetes laticosta</i> .                                                                                                          |
| .....                         | Specific reference queried.                                                                                                                     |
| Williamsville, N. Y.          | Exfoliated ventral valve, imbedded.                                                                                                             |
| .....                         | As type of <i>Chonetes laticosta</i> .                                                                                                          |
| Ontario Co., N. Y.            | Ventral valve, imbedded.                                                                                                                        |
| Cattaraugus Co., N. Y.        | External imprint dorsal valve, somewhat imperfect.                                                                                              |
| Devil's Backbone, Ill.        | Imbedded.                                                                                                                                       |
| Outlet L. Keuka, N. Y.        | Entire individual.                                                                                                                              |
| Western New York.             |                                                                                                                                                 |
| Bellona, N. Y.                | A dorsal valve, imbedded.                                                                                                                       |
| Near Tioga, N. Y.             | Cast of a somewhat distorted ventral valve.                                                                                                     |
| Nr. Cumberland, Md.           | Internal cast of ventral valve, imbedded with many others.                                                                                      |
| .....                         | As <i>Strophomena setigera</i> .                                                                                                                |
| Near Caledonia, N. Y.         | An imbedded ventral valve; possibly from Avon, N. Y.                                                                                            |
| Painted Post, N. Y.           | Exfoliated, imbedded.                                                                                                                           |
| .....                         | As <i>Chonetes coronatus</i> Con.                                                                                                               |
| Summit, N. Y.                 | Opposite valves imbedded together. Is= <i>Chonetes coronatus</i> Con., according to Hall. Locality is in Schoharie county.                      |
| .....                         | As <i>Chonetes coronatus</i> Con.                                                                                                               |
| Summit, N. Y.                 | Int. impt. ventr. valve. Is= <i>Chonetes coronatus</i> Con., acc. to Hall.                                                                      |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                    | REFERENCE.   |          |       |       |                      |
|---------------|------------------|-------------------|-------------------------------------------------------------------------------|--------------|----------|-------|-------|----------------------|
|               |                  |                   |                                                                               | Work.        | Vol.     | P.    | Pl.   | Figs.                |
| Ham.          | <u>4542</u><br>1 | Fig'd.            | <b>Chonetes</b> Fischer— <i>Cont.</i><br>Tuomeyi ( <i>N. &amp; P.</i> ) Hall. | Pal. N. Y.   | 4        | 136   | 21    | 9a, b                |
| "             | <u>4543</u><br>1 | Type.             | Yandellanus .....Hall.                                                        | N. Y. S. M.  | 10       | 118   |       |                      |
|               |                  |                   | "                                                                             | Pal. N. Y.   | 4        | 123   | 20    | 4a-g                 |
|               |                  |                   | H. & C.                                                                       | St. G. N. Y. | 11       | ....  | 20    | 10                   |
|               |                  |                   | "                                                                             | Pal. N. Y.   | 8, pt. 1 | ....  | 16    | 34                   |
| Orisk.        | <u>2667</u><br>1 | "                 | <b>Chonostrophia</b> H. & C.....                                              | .....        | .....    | ..... | ..... | .....                |
|               |                  |                   | complanatus .....Hall.                                                        | N. Y. S. M.  | 10       | 56    | ....  | .....                |
|               |                  |                   | "                                                                             | Pal. N. Y.   | 3        | 418   | 93    | 1a-c, 2c             |
|               |                  |                   | "                                                                             | St. G. N. Y. | 2        | ....  | 47    | 29, <i>int.v.v.</i>  |
|               |                  |                   | H. & C.                                                                       | "            | 11       | ....  | 20    | 21, "                |
|               |                  |                   | "                                                                             | Pal. N. Y.   | 8, pt. 1 | 311   | 16    | 29, "                |
| "             | <u>2667</u><br>3 | "                 | " .....Hall.                                                                  | St. G. N. Y. | 2        | ....  | 47    | 13, <i>int.v.v.</i>  |
|               |                  |                   | H. & C.                                                                       | "            | 11       | ....  | 20    | 20, "                |
|               |                  |                   | "                                                                             | Pal. N. Y.   | 8, pt. 1 | 311   | 16    | 13, "                |
| U. H.         | <u>3078</u><br>1 | Fig'd.            | <b>Cœlospira</b> Hall.<br>acutiplicata ( <i>Con.</i> )..Hall.                 | " "          | 4        | 365   | 57    | 32-37, 39            |
|               |                  |                   | H. & C.                                                                       | " "          | 8, pt. 2 | 136   | 53    | 32-35                |
| "             | <u>3078</u><br>3 | "                 | " " ..Hall.                                                                   | " "          | 4        | 365   | 57    | 38                   |
| "             | <u>2470</u><br>2 | Type.             | camilla.....Hall.                                                             | " "          | 4        | 329   | 52    | 13-19                |
|               |                  |                   | H. & C.                                                                       | St. G. N. Y. | 13       | ....  | 39    | 11-14                |
|               |                  |                   | "                                                                             | Pal. N. Y.   | 8, pt. 2 | 136   | 53    | 24-28                |
|               |                  |                   | concava.....                                                                  | " "          | 4        | 329   | ....  | .....                |
| Ham.          | <u>4544</u><br>1 | Gen. and Sp.Type. | <b>Cranæna</b> H. & C.....                                                    | .....        | .....    | ..... | ..... | .....                |
|               |                  |                   | Romingeri.....Hall.                                                           | N. Y. S. M.  | 16       | 48    | ....  | .....                |
|               |                  |                   | "                                                                             | Pal. N. Y.   | 4        | 389   | 60    | 66, 67               |
|               |                  |                   | H. & C.                                                                       | " "          | 8, pt. 2 | 297   | 80    | 16, 17               |
| "             | <u>4544</u><br>2 | "                 | " .....Hall.                                                                  | " "          | 4        | 389   | 60    | 20, <i>d.v.</i> X 2  |
| "             | <u>4545</u><br>1 | Type.             | <b>Crania</b> Retzius.<br>crenistriata .....Hall.                             | N. Y. S. M.  | 13       | 78    |       |                      |
|               |                  |                   | "                                                                             | Pal. N. Y.   | 4        | 28    | 3     | 13, <i>d. v.</i>     |
| "             | <u>4545</u><br>2 | "                 | " " ..Hall.                                                                   | " "          | 4        | 28    | 3     | 15, 16               |
|               |                  |                   | H. & C.                                                                       | " "          | 8, pt. 1 | ....  | 4H    | 10, 11               |
| Chem.         | <u>4546</u><br>1 | "                 | hamiltoniæ.....                                                               | .....        | .....    | ..... | ..... | .....                |
|               |                  |                   | leoni.....Hall.                                                               | N. Y. S. M.  | 13       | 78    |       |                      |
|               |                  |                   | "                                                                             | Pal. N. Y.   | 4        | 30    | 3     | 27-30                |
|               |                  |                   | H. & C.                                                                       | St. G. N. Y. | 11       | ....  | 6     | 20                   |
|               |                  |                   | "                                                                             | Pal. N. Y.   | 8, pt. 1 | ....  | 4H    | 34, 35               |
| "             | <u>4546</u><br>2 | Fig'd.            | leoni?.....Hall.                                                              | " "          | 4        | 30    | 3     | 25, 26               |
| Ham.          | <u>4547</u><br>1 | Type.             | <b>Craniella</b> Oehlert.<br>hamiltoniæ .....Hall.                            | N. Y. S. M.  | 13       | 77    | p. 76 | 5, <i>int. v. v.</i> |
|               |                  |                   | "                                                                             | Pal. N. Y.   | 4        | 27    | 3     | 20, "                |
| "             | "                | "                 | " " ..Hall.                                                                   | " "          | 4        | 27    | 3     | 19                   |
|               |                  |                   | H. & C.                                                                       | " "          | 8, pt. 1 | 153   | 4I    | 6                    |
| "             | <u>4548</u><br>1 | "                 | <b>Cryptonella</b> Hall.<br>?elia.....Hall.                                   | " "          | 4        | 390   | 60    | 26-28                |
| Chem.         | <u>4549</u><br>1 | "                 | eudora.....Hall.                                                              | " "          | 4        | 398   | 61    | 29, 30               |
| "             | "                | "                 | " " ..Hall.                                                                   | " "          | 4        | 398   | 61    | 34, 35               |
|               |                  |                   | iphis.....                                                                    | .....        | .....    | ..... | ..... | .....                |
| Ham.          | <u>4550</u><br>1 | Type.             | ? jucunda.....Hall.                                                           | Pal. N. Y.   | 4        | 390   | 60    | 29-31                |
| U. H.         | <u>3084</u><br>1 | "                 | lens.....Hall.                                                                | N. Y. S. M.  | 13       | 89    | ....  | .....                |
|               |                  |                   | "                                                                             | Pal. N. Y.   | 4        | 386   | 60    | 1-4                  |



| LOCALITY.              | REMARKS.                                                                                                                              |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Devil's Backbone, Ill. | A somewhat broken individual. Identified by Norwood & Pratten.<br>Is= <i>Chonetes coronatus</i> Con. Loc. given by Norwood & Pratten. |
| .....                  | As <i>Chonetes lineatus</i> Con., by error.                                                                                           |
| Louisville, Ky.        | " " " " " One entire individual and two detached opposite valves. From above the "bone bed."                                          |
| .....                  | Defined as a subgenus of <i>Chonetes</i> .                                                                                            |
| .....                  | As <i>Chonetes complanatus</i> .                                                                                                      |
| .....                  | " " "                                                                                                                                 |
| .....                  | " " "                                                                                                                                 |
| Knox, N. Y.            | Exterior imprints of two valves and interior imprint of another.                                                                      |
| .....                  | As <i>Chonetes complanatus</i> .                                                                                                      |
| Gaspé, N. B.           | Interior imprint of ventral valve.                                                                                                    |
| .....                  | As <i>Leptocælia acutiplicata</i> .                                                                                                   |
| Near Phelps, N. Y.     | Two entire individuals and a ventral valve with part of dorsal valve adhering; silicified.                                            |
| Central New York.      | As <i>Leptocælia acutiplicata</i> . Dorsal valve, imbedded.                                                                           |
| .....                  | As <i>Cælospira concava</i> Hall, in the text, by error.                                                                              |
| Caledonia, N. Y.       | Two individuals and two detached opposite valves.                                                                                     |
| .....                  | See <i>Cælospira camilla</i> .                                                                                                        |
| .....                  | Defined as a subgenus of <i>Dielasma</i> .                                                                                            |
| .....                  | As <i>Terebratula Romingeri</i> .                                                                                                     |
| .....                  | " " "                                                                                                                                 |
| Thunder Bay, Mich.     | An individual cut so as to show loop.                                                                                                 |
| Hamburg, N. Y.         | A small rotund individual from the shore of the lake. This species is probably identical with <i>Eunella Lincklæni</i> .              |
| Canandaigua L., N. Y.  | A dorsal valve, imbedded. From near Black Point.                                                                                      |
| 18 Mile Creek, N. Y.   | A dorsal valve on an <i>Athyris spiriferoides</i> .                                                                                   |
| .....                  | See <i>Craniella hamiltoniæ</i> .                                                                                                     |
| Leon, N. Y.            | Three internal casts.                                                                                                                 |
| Near Angelica, N. Y.   | A partly exfoliated dorsal valve, imbedded. From Hull's Mill.                                                                         |
| .....                  | As <i>Crania hamiltonensis</i> , apparently by error.                                                                                 |
| Canandaigua L., N. Y.  | " " <i>hamiltoniæ</i> . One of a group of three ventral valves attached to the ventral valve of a <i>Tropidoleptus carinatus</i> .    |
| .....                  | As <i>Crania hamiltoniæ</i> .                                                                                                         |
| Canandaigua L., N. Y.  | Three individuals on a <i>Tropidoleptus carinatus</i> .                                                                               |
| Waterloo, Ia.          | As <i>Terebratula elia</i> . Silicified. Right margin restored.                                                                       |
| Near Ithaca, N. Y.     | As <i>Cryptonella iphis</i> in expl. pl., by error. Internal cast.                                                                    |
| " "                    | Internal casts of an individual and of a dorsal valve.                                                                                |
| .....                  | See <i>Cryptonella eudora</i> .                                                                                                       |
| Waterloo, Ia.          | Individual ground down to show loop.                                                                                                  |
| .....                  | As <i>Terebratula lens</i> .                                                                                                          |
| Clarence Hollow, N. Y. | " " " Internal cast and an exfoliated individual.                                                                                     |

## Class BRACHIOPODA—Continued.

| Geol. Subdiv.    | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.    | REFERENCE.   |          |       |       |                |
|------------------|------------------|--------------------|-------------------------------|--------------|----------|-------|-------|----------------|
|                  |                  |                    |                               | Work.        | Vol.     | P.    | Pl.   | Figs.          |
| Chem. Ham.       | $\frac{4551}{1}$ | Type.              | <b>Cryptonella</b> Hall—Cont. |              |          |       |       |                |
|                  |                  |                    | <i>Lincklæni</i> .....        | .....        | .....    | ..... | ..... | .....          |
|                  |                  |                    | navicella.....Hall.           | Pal. N. Y.   | 4        | 391   | 60    | 38-44          |
|                  | $\frac{4552}{1}$ | “                  | planirostra.....Hall.         | N. Y. S. M.  | 13       | 89    | ..... | .....          |
|                  |                  |                    | “.....                        | “ “          | 14       | 101   | ..... | .....          |
|                  |                  |                    | “.....                        | Pal. N. Y.   | 4        | 395   | 61    | 12-18          |
|                  | “                | “                  | “.....H. & C.                 | “ “          | 8, pt. 2 | 286   | 80    | 5, d. v.       |
|                  |                  |                    | “.....Hall.                   | “ “          | 4        | 395   | 61    | 22, enl.       |
|                  |                  |                    | “.....H. & C.                 | St. G. N. Y. | 13       | ....  | 52    | 21, “          |
|                  | “                | Gen. and Sp. Type. | “.....                        | Pal. N. Y.   | 8, pt. 2 | 286   | 80    | 10, “          |
|                  |                  |                    | rectirostra.....Hall.         | N. Y. S. M.  | 13       | 88    | ..... | .....          |
|                  |                  |                    | “.....                        | “ “          | 14       | 101   | ..... | .....          |
|                  | “                | “                  | “.....                        | Pal. N. Y.   | 4        | 394   | 61    | 2-7            |
|                  |                  |                    | “.....H. & C.                 | St. G. N. Y. | 13       | ....  | 52    | 16, 17         |
|                  |                  |                    | “.....                        | Pal. N. Y.   | 8, pt. 2 | 286   | 80    | 1-4            |
|                  | $\frac{4553}{2}$ | “                  | “.....Hall.                   | “ “          | 4        | 394   | 61    | 8, ext. v. v.  |
| Chem.            | $\frac{4554}{1}$ | “                  | <b>Cyclorhina</b> H. & C.     |              |          |       |       |                |
|                  |                  |                    | nobilis.....Hall.             | N. Y. S. M.  | 13       | 83    | ..... | .....          |
|                  |                  |                    | “.....                        | Pal. N. Y.   | 4        | 412   | 63    | 35             |
|                  | “                | “                  | “.....H. & C.                 | St. G. N. Y. | 13       | 830   | 42    | 30             |
|                  |                  |                    | “.....                        | Pal. N. Y.   | 8, pt. 2 | 207   | 61    | 12             |
|                  |                  |                    | “.....Hall.                   | “ “          | 4        | 412   | 63    | 33, 34         |
|                  | $\frac{4555}{1}$ | Type.              | <b>Cyrtia</b> Dalman.         |              |          |       |       |                |
|                  |                  |                    | biplicata.....                | .....        | .....    | ..... | ..... | .....          |
|                  |                  |                    | cyrtiniformis...H. & W.       | N. Y. S. M.  | 23       | 238   | ..... | .....          |
|                  |                  |                    | “.....H. & C.                 | Pal. N. Y.   | 8, pt. 2 | 42    | 25    | 31, int. d. v. |
|                  |                  |                    | hamiltonensis.....            | .....        | .....    | ..... | ..... | .....          |
|                  |                  |                    | rostrata.....                 | .....        | .....    | ..... | ..... | .....          |
| Scho. U. H. Ham. | $\frac{2832}{1}$ | Type.              | <b>Cyrtina</b> Davidson.      |              |          |       |       |                |
|                  |                  |                    | biplicata.....Hall.           | N. Y. S. M.  | 10       | 165   | ..... | .....          |
|                  |                  |                    | “.....                        | Pal. N. Y.   | 4        | 266   | 27    | 9, 10          |
|                  | $\frac{3068}{1}$ | “                  | crassa.....Hall.              | “ “          | 4        | 267   | 27    | 11, 12         |
|                  |                  |                    | “.....H. & C.                 | “ “          | 8, pt. 2 | 46    | 28    | 13, 15         |
|                  |                  |                    | “.....                        | “ “          | 4        | 270   | 44    | 53-55          |
|                  | “                | Fig'd.             | curvilineata (White) Hall.    | “ “          | 4        | 270   | 44    | 53-55          |
|                  |                  |                    | “.....H. & C.                 | St. G. N. Y. | 13       | ....  | 29    | 16             |
|                  |                  |                    | “.....                        | Pal. N. Y.   | 8, pt. 2 | 46    | 28    | 11, 12         |
|                  | $\frac{4557}{1}$ | Type.              | hamiltonensis.....Hall.       | N. Y. S. M.  | 10       | 166   | ..... | .....          |
|                  |                  |                    | “.....                        | Pal. N. Y.   | 4        | 268   | 44    | 26-30          |
|                  |                  |                    | “.....                        | “ “          | 4        | 268   | 44    | 31, 33         |
|                  | $\frac{4557}{2}$ | “                  | “.....                        | “ “          | 4        | 268   | 44    | 38-40          |
|                  |                  |                    | “.....                        | “ “          | 4        | 268   | 44    | 27, 28         |
|                  |                  |                    | “.....H. & C.                 | “ “          | 8, pt. 2 | 46    | 28    | 27, 28         |
|                  | $\frac{4557}{4}$ | “                  | “.....Hall.                   | “ “          | 4        | 268   | 44    | 41, 42         |
|                  |                  |                    | “.....                        | “ “          | 4        | 268   | 44    | 43, 44         |
|                  |                  |                    | “.....H. & C.                 | St. G. N. Y. | 13       | ....  | 29    | 17, int. X 2   |
|                  | $\frac{4557}{5}$ | “                  | “.....                        | Pal. N. Y.   | 8, pt. 2 | 46    | 28    | 26, 33         |
|                  |                  |                    | “.....Hall.                   | “ “          | 4        | 268   | 44    | 45-47          |
|                  |                  |                    | “.....H. & C.                 | St. G. N. Y. | 13       | ....  | 29    | 12, v. v. X 2  |
|                  | $\frac{4557}{3}$ | “                  | “.....                        | Pal. N. Y.   | 8, pt. 2 | 46    | 28    | 25, 29, 32     |
|                  |                  |                    | “.....Hall.                   | “ “          | 4        | 268   | 44    | 48, 49         |
|                  |                  |                    | “.....H. & C.                 | St. G. N. Y. | 13       | ....  | 29    | 13 sect.       |
| “                | $\frac{4558}{1}$ | “                  | “.....                        | Pal. N. Y.   | 8, pt. 2 | 46    | 28    | 23, 24         |
|                  |                  |                    | “ var. recta Hall.            | “ “          | 4        | 270   | 44    | 34-36          |
|                  |                  |                    | “.....H. & C.                 | St. G. N. Y. | 13       | ....  | 29    | 14, 15         |
|                  |                  |                    | “.....                        | Pal. N. Y.   | 8, pt. 2 | ....  | 28    | 21, 22         |



| LOCALITY.                                           | REMARKS.                                                                                                                                                     |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....<br>Rockford, Iowa.<br>.....<br>.....<br>..... | See <i>Eunella Lincklæni</i> .<br>As <i>Terebratula navicella</i> . Three individuals.<br>" " <i>planirostra</i> .<br>Referred to genus <i>Cryptonella</i> . |
| Moscow, N. Y.                                       | Three entire individuals showing variations.                                                                                                                 |
| " "                                                 | Rostral portion of a large ventral valve.                                                                                                                    |
| .....                                               | As <i>Terebratula rectirostra</i> .                                                                                                                          |
| .....                                               | Genus <i>Cryptonella</i> established.                                                                                                                        |
| Canandaigua L., N. Y.                               | Two entire individuals.                                                                                                                                      |
| Moscow, N. Y.                                       | Large ventral valve with beak of dorsal valve attached.                                                                                                      |
| .....                                               | As <i>Rhynchospira nobilis</i> .                                                                                                                             |
| .....                                               | As <i>Trematospira ? nobilis</i> .                                                                                                                           |
| .....                                               | Genus <i>Cyclorhina</i> established.                                                                                                                         |
| Darien, N. Y.                                       | Weathered dorsal valve showing mould of the crura.                                                                                                           |
| " "                                                 | A crushed individual and a crushed ventral valve, latter imbedded.                                                                                           |
| .....                                               | See <i>Cyrtina biplicata</i> .                                                                                                                               |
| .....                                               | As <i>Spirifer cyrtiniformis</i> .                                                                                                                           |
| Rockford, Iowa.                                     | A dorsal valve.                                                                                                                                              |
| .....                                               | See <i>Cyrtina hamiltonensis</i> .                                                                                                                           |
| .....                                               | See <i>Cyrtina rostrata</i> .                                                                                                                                |
| .....                                               | See <i>Cyrtina umbonata</i> .                                                                                                                                |
| .....                                               | As <i>Cyrtia biplicata</i> .                                                                                                                                 |
| Schoharie, N. Y.                                    | Internal cast of ventral valve.                                                                                                                              |
| Phelps Tp., N. Y.                                   | A somewhat exfoliated and distorted individual. The locality was originally called Vienna.                                                                   |
| .....                                               | Specific reference queried.                                                                                                                                  |
| Nr. Iowa City, Iowa.                                | Entire individual.                                                                                                                                           |
| .....                                               | As <i>Cyrtia hamiltonensis</i> .                                                                                                                             |
| Darien, N. Y.                                       | Entire individual.                                                                                                                                           |
| Moscow, N. Y.                                       | Two entire individuals.                                                                                                                                      |
| Widder, Ont.                                        | A large individual with strongly curved beak.                                                                                                                |
| Bosanquet, Ont.                                     | A very large individual.                                                                                                                                     |
| Widder, Ont.                                        | Middle portion of a dorsal valve.                                                                                                                            |
| Cumberland, Md.                                     | Internal cast. Figures are enlargements to 2 diameters.                                                                                                      |
| Widder, Ont.                                        | Axial section of one individual and transverse section of another.                                                                                           |
| 18 Mile Creek, N. Y.                                | An entire adult.                                                                                                                                             |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.            | REFERENCE.   |          |       |        |                |
|---------------|------------------|--------------------|---------------------------------------|--------------|----------|-------|--------|----------------|
|               |                  |                    |                                       | Work.        | Vol.     | P.    | Pl.    | Figs.          |
| Chem. Orisk.  | $\frac{4558}{2}$ | Type.              | <b>Cyrtina</b> Davidson— <i>Cont.</i> |              |          |       |        |                |
|               | $\frac{2672}{3}$ | "                  | hamiltonensis var. recta H.           | Pal. N. Y.   | 4        | 270   | 44     | 37             |
| "             | "                | "                  | rostrata.....Hall.                    | N. Y. S. M.  | 10       | 64    | .....  | .....          |
|               |                  |                    | "                                     | Pal. N. Y.   | 3        | 429   | 96     | 1a-4d          |
| "             | "                | "                  | ".....H. & C.                         | " "          | 8, pt. 2 | 46    | 25     | 1-5, 8         |
|               |                  |                    | ".....Hall.                           | " "          | 3        | 429   | 96     | 5, 6           |
| "             | $\frac{2672}{1}$ | "                  | ".....H. & C.                         | " "          | 8, pt. 2 | 46    | 25     | 6, 7           |
|               |                  |                    | ".....Hall.                           | " "          | 3        | 429   | 98     | 8a, b          |
| Ham.          | $\frac{4559}{1}$ | "                  | umbonata.....Hall.                    | Geol. Ia.    | 1, pt. 2 | 512   | 5      | 2a-c           |
| U. H.         | $\frac{3038}{1}$ | "                  | <b>Dalmanella</b> H. & C.             |              |          |       |        |                |
|               |                  |                    | lentiformis (H.) H. & C.              | Pal. N. Y.   | 8, pt. 1 | 224   | 5C     | 41, int. v. v. |
| Chem. Ham.    | $\frac{4560}{1}$ | "                  | ".....Hall.                           | " "          | 4        | 62    | 8      | 8, ext. v. v.  |
|               | $\frac{4561}{1}$ |                    | lepida.....Hall.                      | N. Y. S. M.  | 13       | 78    | .....  | .....          |
| Orisk.        | $\frac{2419}{3}$ | "                  | ".....Hall.                           | Pal. N. Y.   | 4        | 46    | 6      | 1a-f           |
|               |                  |                    | planoconvexa.....Hall.                | " "          | 3        | 168   | 12     | 1a, b, 4-6     |
| Ham.          | $\frac{4562}{1}$ | Gen. and Sp. Type. | <i>Delthyris</i> Dalman               |              |          |       |        |                |
|               |                  |                    | <i>acuminata</i> .....                |              |          |       |        |                |
|               |                  |                    | <i>congesta</i> .....                 |              |          |       |        |                |
|               |                  |                    | <i>cuspidata</i> .....                |              |          |       |        |                |
|               |                  |                    | <i>disjuncta</i> .....                |              |          |       |        |                |
|               |                  |                    | <i>lævis</i> .....                    |              |          |       |        |                |
|               |                  |                    | <i>macronota</i> .....                |              |          |       |        |                |
|               |                  |                    | <i>medialis</i> .....                 |              |          |       |        |                |
|               |                  |                    | <i>mesastrialis</i> .....             |              |          |       |        |                |
|               |                  |                    | <i>mucronata</i> .....                |              |          |       |        |                |
|               |                  |                    | <i>zigzag</i> .....                   |              |          |       |        |                |
|               |                  |                    | <b>Dignomia</b> Hall.                 |              |          |       |        |                |
| Ham.          | $\frac{4562}{1}$ | Gen. and Sp. Type. | alveata.....Hall.                     | Pal. N. Y.   | 4        | 12    | 2      | 15             |
|               |                  |                    | "                                     | N. Y. S. M.  | 23       | 245   | .....  | .....          |
|               |                  |                    | <b>Discina</b> Lamarck.               |              |          |       |        |                |
|               |                  |                    | <i>allegghania</i> .....              |              |          |       |        |                |
|               |                  |                    | <i>ampla</i> .....                    |              |          |       |        |                |
|               |                  |                    | <i>doria</i> .....                    |              |          |       |        |                |
|               |                  |                    | <i>elmira</i> .....                   |              |          |       |        |                |
|               |                  |                    | <i>grandis</i> Hall non Vanuxem       |              |          |       |        |                |
|               |                  |                    | " Vanuxem                             |              |          |       |        |                |
|               |                  |                    | <i>lodensis</i> .....                 |              |          |       |        |                |
|               |                  |                    | <i>media</i> .....                    |              |          |       |        |                |
|               |                  |                    | <i>minuta</i> .....                   |              |          |       |        |                |
| Chem. Ham.    | $\frac{4563}{1}$ | Type.              | <b>Douvillina</b> Oehlert.            |              |          |       |        |                |
|               |                  |                    | arcuata.....Hall.                     | Geol. Ia.    | 1, pt. 2 | 492   | 3      | 1a-d, 2a-c     |
|               |                  |                    | cayuta.....Hall.                      | Pal. N. Y.   | 4        | 110   | 10     | 1, int.        |
|               |                  |                    | "                                     | " "          | 4        | 110   | 10     | 2, 5           |
|               |                  |                    | "                                     | St. G. N. Y. | 2        | ..... | 46     | 18, 19         |
|               |                  |                    | "                                     | " "          | 11       | ..... | 14     | 19             |
|               |                  |                    | ".....H. & C.                         | Pal. N. Y.   | 8, pt. 1 | 289   | 15     | 18, 19         |
|               |                  |                    | "                                     | " "          | 4        | 110   | 10     | 3              |
|               |                  |                    | ".....Hall.                           | Geol. N. Y.  | 4th D.   | 201   | ct. 80 | 4, ext.        |
|               |                  |                    | <i>inæquistriata</i> (Con.) Hall.     | Pal. N. Y.   | 4        | 106   | 15     | 11, enl. X 2   |
|               |                  |                    | "                                     | St. G. N. Y. | 2        | ..... | 45     | 5, "           |
|               |                  |                    | ".....H. & C.                         | Pal. N. Y.   | 8, pt. 1 | 289   | 14     | 5, "           |



| LOCALITY.                           | REMARKS.                                                                                                                                                                                    |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Belmont, N. Y.                      | Cast of ventral valve, retaining shell along cardinal area.                                                                                                                                 |
| .....                               | As <i>Cyrtia rostrata</i> .                                                                                                                                                                 |
| .....                               | “ “ “                                                                                                                                                                                       |
| Cumberland, Md.                     | Four silicified individuals, young to very old.                                                                                                                                             |
| .....                               | As <i>Cyrtia rostrata</i> .                                                                                                                                                                 |
| Cumberland, Md.                     | A dorsal and a ventral valve silicified.                                                                                                                                                    |
| Schoharie, N. Y.                    | As <i>Cyrtia rostrata</i> . Internal cast of a ventral valve.                                                                                                                               |
| Rock Island, Ill.                   | “ “ <i>umbonata</i> . A ventral valve and an entire individual.                                                                                                                             |
| Shortsville, N. Y.                  | As <i>Orthis lenticularis</i> Vanux. A ventral valve. Vanuxem's name was preoccupied and Miller proposed the name <i>Orthis eboracensis</i> for this species. N. A. Geol. and Pal., p. 357. |
| Conewango, N. Y.                    | As <i>Orthis leonensis</i> . External imprint of ventral valve.                                                                                                                             |
| .....                               | “ “ <i>lepida</i> .                                                                                                                                                                         |
| Canandaigua L., N. Y.               | “ “ “                                                                                                                                                                                       |
| Cumberland, Md.                     | A small individual, two opposite valves and an int. cast; silicified.                                                                                                                       |
| .....                               | Synonym of <i>Spirifer</i> .                                                                                                                                                                |
| .....                               | “ “ <i>mesacostalis</i> .                                                                                                                                                                   |
| .....                               | “ “ <i>granulosus</i> .                                                                                                                                                                     |
| .....                               | “ “ <i>disjunctus</i> .                                                                                                                                                                     |
| .....                               | “ “ “                                                                                                                                                                                       |
| .....                               | “ “ <i>lævis</i> .                                                                                                                                                                          |
| .....                               | “ “ <i>audaculus</i> var. <i>macronotus</i> .                                                                                                                                               |
| .....                               | “ “ “                                                                                                                                                                                       |
| .....                               | “ “ <i>mesastrialis</i> .                                                                                                                                                                   |
| .....                               | “ “ <i>mucronatus</i> .                                                                                                                                                                     |
| .....                               | “ “ <i>consobrinus</i> .                                                                                                                                                                    |
| .....                               | As <i>Lingula alveata</i> .                                                                                                                                                                 |
| Ludlowville, N. Y.                  | Gen. <i>Dignomia</i> established. Cast of a valve preserving some shell.                                                                                                                    |
| .....                               | See <i>Orbiculoidea alleghania</i> .                                                                                                                                                        |
| .....                               | “ “ <i>ampla</i> .                                                                                                                                                                          |
| .....                               | “ “ <i>doria</i> and <i>Lingulodiscina exilis</i> .                                                                                                                                         |
| .....                               | “ “ <i>elmira</i> .                                                                                                                                                                         |
| .....                               | “ “ <i>ampla</i> .                                                                                                                                                                          |
| .....                               | “ <i>Ræmerella grandis</i> .                                                                                                                                                                |
| .....                               | “ <i>Orbiculoidea lodensis</i> .                                                                                                                                                            |
| .....                               | “ “ <i>media</i> .                                                                                                                                                                          |
| .....                               | “ “ <i>minuta</i> .                                                                                                                                                                         |
| .....                               | “ “ <i>seneca</i> .                                                                                                                                                                         |
| .....                               | “ “ <i>truncata</i> .                                                                                                                                                                       |
| .....                               | Considered by Hall and Clarke to be a subgenus of <i>Stropheodonta</i> .                                                                                                                    |
| Rockford, Iowa.                     | As <i>Stropheodonta arcuata</i> . Two entire indiv. and a ventral valve.                                                                                                                    |
| Near Bath, N. Y.                    | “ “ <i>cayuta</i> . Int. cast small ventr. valve. Steuben county.                                                                                                                           |
| .....                               | “ “ “                                                                                                                                                                                       |
| .....                               | “ “ “                                                                                                                                                                                       |
| Near Elmira, N. Y.                  | Internal cast of ventral valve.                                                                                                                                                             |
| Near Blossburg, Pa.                 | As <i>Stropheodonta cayuta</i> . Internal cast of ventral valve.                                                                                                                            |
| Seneca Lake, N. Y.                  | As <i>Strophomena inequistriata</i> . A ventral valve.                                                                                                                                      |
| .....                               | As <i>Stropheodonta inequistriata</i> .                                                                                                                                                     |
| .....                               | “ “ “                                                                                                                                                                                       |
| Bristol, or Canandaigua Lake, N. Y. | Central portion of a dorsal valve imbedded.                                                                                                                                                 |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.              | REFERENCE.   |             |             |             |                                 |
|---------------|------------------|---------------------|-----------------------------------------|--------------|-------------|-------------|-------------|---------------------------------|
|               |                  |                     |                                         | Work.        | Vol.        | P.          | Pl.         | Figs.                           |
| Ham.          | $\frac{4565}{3}$ | Fig'd.              | <b>Douvillina</b> Oehlert— <i>Cont.</i> |              |             |             |             |                                 |
|               |                  |                     | inæquistriata ( <i>Con.</i> ) Hall.     | Pal. N. Y.   | 4           | 106         | 18          | 2b, e, g                        |
|               |                  |                     | “ “ “ “ “ “                             | St. G. N. Y. | 2           | ....        | 45          | 1-3                             |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 11          | ....        | 14          | 16, 17                          |
| “             | $\frac{4565}{2}$ | “                   | “ “ “ “ “ “                             | Pal. N. Y.   | 8, pt. I    | 289         | 14          | 1-3                             |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 4           | 106         | 18          | 2k, <i>enl.</i>                 |
|               |                  |                     | “ “ “ “ “ “                             | St. G. N. Y. | 2           | ....        | 45          | 6, <i>int.</i> X 2              |
|               |                  |                     | “ “ “ “ “ “                             | Pal. N. Y.   | 8, pt. I    | 289         | 14          | 6, “                            |
| Chem.         | $\frac{4566}{1}$ | “                   | cayuta ..... Hall.                      | Geol. N. Y.  | 4th D.      | 267         | ct. 120     | 5c                              |
| Orisk.        | $\frac{2496}{3}$ | “                   | <b>Eatonia</b> Hall.                    |              |             |             |             |                                 |
|               |                  |                     | peculiaris ( <i>Con.</i> ).... Hall.    | Pal. N. Y.   | 3           | 436         | 101         | 2a-c                            |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 3           | 436         | 101         | 2d, e                           |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 8, pt. 2    | 206         | 61          | 21, 26                          |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 3           | 436         | 101         | 2f, <i>int. v.v.</i>            |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 3           | 436         | 101         | 2g, <i>v.v.</i> X $\frac{3}{2}$ |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 3           | 436         | 101 A       | 1h, “                           |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 3           | 436         | 101 A       | 31, “                           |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 13          | ....        | 44          | 19, “                           |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 8, pt. 2    | 206         | 61          | 1a, b, f                        |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 3           | 436         | 101 A       | 34, <i>int. v.v.</i>            |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 13          | ....        | 44          | 25, “                           |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 8, pt. 2    | 206         | 61          | 1c, d, g                        |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 3           | 436         | 101 A       | 1, <i>int. v.v.</i>             |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 3           | 437         | 101         | 3-6                             |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 3           | 437         | 101 A       | 2a, b                           |
| Ham.          | $\frac{4567}{1}$ | “                   | <b>Eunella</b> Hall & Clarke.....       |              |             |             |             |                                 |
|               |                  |                     | harmonia ..... Hall.                    | Pal. N. Y.   | 4           | 388         | 60          | 11, <i>d. v.</i>                |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 4           | 388         | 60          | 14-16                           |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 8, pt. 2    | 290         | 80          | 33, 34                          |
|               |                  |                     | Lincklæni ..... Hall.                   | N. Y. S. M.  | 13          | 88          | ....        | ....                            |
|               |                  |                     | “ “ “ “ “ “                             | Pal. N. Y.   | 4           | 397         | 60          | 49-63                           |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 13          | ....        | 52          | 30, 31                          |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 8, pt. 2    | 290         | 80          | 28, 29                          |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 4           | 397         | 60          | 64, 65                          |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 8, pt. 2    | 290         | 80          | 31, 32                          |
|               |                  |                     | “ “ <i>var.</i> ..... Hall.             | “ “ “ “ “ “  | 4           | 418         | 60          | 32-37, 71                       |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 8, pt. 2    | ....        | 80          | 30                              |
| U. H.         | $\frac{4201}{1}$ | “                   | simulator ..... Hall.                   | “ “ “ “ “ “  | 4           | 391         | 60          | 69, 70                          |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 13          | ....        | 52          | 29, <i>enl.</i> X 2             |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 8, pt. 2    | 290         | 80          | 27, “                           |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | “ “ “ “ “ “ | “ “ “ “ “ “ | “ “ “ “ “ “ | “ “ “ “ “ “                     |
| Ham.          | $\frac{4569}{1}$ | Fig'd Sp. and G. T. | <b>Gypidula</b> Hall.                   |              |             |             |             |                                 |
|               |                  |                     | comis (Owen) ..... Hall.                | Geol. Ia.    | 1, pt. 2    | 514         | 6           | 2a-c                            |
|               |                  |                     | “ “ “ “ “ “                             | Pal. N. Y.   | 4           | 380         | 58a         | 1-5, 8                          |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 13          | 847         | 48          | 22, <i>enl.</i>                 |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 8, pt. 2    | 248         | 72          | 18-20                           |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 4           | 380         | 58a         | 6, 7                            |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | 8, pt. 2    | 248         | 72          | 22, 23                          |
|               |                  |                     | “ “ “ “ “ “                             | “ “ “ “ “ “  | “ “ “ “ “ “ | “ “ “ “ “ “ | “ “ “ “ “ “ | “ “ “ “ “ “                     |
| U. H.         | $\frac{4199}{1}$ | Type.               | <i>lævis</i> ..... Hall.                |              |             |             |             |                                 |
|               |                  |                     | <i>læviuscula</i> ..... Hall.           | Pal. N. Y.   | 4           | 381         | 58          | 22, 23                          |
|               |                  |                     | <i>occidentalis</i> ..... Hall.         | “ “ “ “ “ “  | “ “ “ “ “ “ | “ “ “ “ “ “ | “ “ “ “ “ “ | “ “ “ “ “ “                     |



| LOCALITY.                          | REMARKS.                                                                                                             |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| .....                              | As <i>Strophodonta inequistriata</i> .                                                                               |
| .....                              | “ “ “                                                                                                                |
| Moscow, N. Y.                      | An almost entire individual.                                                                                         |
| Bristol or Canandaigua Lake, N. Y. | As <i>Strophodonta inequistriata</i> . A ventral valve of medium size.                                               |
| .....                              | As <i>Strophodonta inequistriata</i> .                                                                               |
| Moscow, N. Y.                      | A small ventral valve, imbedded.                                                                                     |
| Near Elmira, N. Y.                 | As <i>Strophomena interstitialis</i> Phillips. Internal imprint of ventral valve.                                    |
| Knox, N. Y.                        | An average individual.                                                                                               |
| “ “                                | Entire internal cast.                                                                                                |
| “ “                                | Entire internal cast retaining part of ventral valve.                                                                |
| “ “                                | Entire internal cast.                                                                                                |
| Cumberland, Md.                    | Two silicified ventral valves.                                                                                       |
| “ “                                | Three silicified dorsal valves.                                                                                      |
| Knox, N. Y.                        | Internal imprint ventral valve.                                                                                      |
| Cumberland, Md.                    | Three internal casts retaining more or less shell, silicified.                                                       |
| “ “                                | A silicified ventral valve.                                                                                          |
| .....                              | Defined as a subgenus of <i>Cryptonella</i> .                                                                        |
| Falls of Ohio River.               | As <i>Terebratula harmonia</i> . Int. cast retaining pt. of silicified shell.                                        |
| .....                              | “ “ “                                                                                                                |
| Falls of Ohio River.               | Silicified individual somewhat broken on margin.                                                                     |
| .....                              | As <i>Terebratula Lincklæni</i> .                                                                                    |
| .....                              | Ref. to <i>Cryptonella</i> (?) in text and to <i>Terebratula</i> in expl. plate.                                     |
| Delphi Falls, N. Y.                | A series of seven individuals.                                                                                       |
| .....                              | Ref. to <i>Cryptonella</i> (?) in text and to <i>Terebratula</i> in expl. plate.                                     |
| Hamilton, N. Y.                    | A somewhat crushed internal cast.                                                                                    |
| .....                              | As <i>Terebratula Lincklæni</i> , var.                                                                               |
| Thunder Bay, Mich.                 | Four individuals, two of which have been cut to show the loop.                                                       |
| .....                              | <i>Cranæna Romingeri</i> is probably identical with this species.                                                    |
| .....                              | As <i>Terebratula simulator</i> .                                                                                    |
| Near Columbus, O.                  | Individual which has been cut to show the loop. Not from the Hamilton group at Widder, Ont., as stated in the books. |
| .....                              | Synonym of <i>Pentagonia</i> , q. v.                                                                                 |
| Independence, Ia.                  | As <i>Pentamerus occidentalis</i> Hall. Two ventral valves.                                                          |
| .....                              | As <i>Gypidula occidentalis</i> . Type of genus.                                                                     |
| Independence, Ia.                  | Entire; exfoliated in places.                                                                                        |
| .....                              | As <i>Gypidula occidentalis</i> .                                                                                    |
| Independence, Ia.                  | Suggested as type of possible new species, <i>Gypidula lævis</i> . Slightly imperfect on lower margin.               |
| .....                              | See <i>Gypidula comis</i> .                                                                                          |
| Waterloo, Ia.                      | An individual.                                                                                                       |
| .....                              | See <i>Gypidula comis</i> .                                                                                          |

## Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.          | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.         | REFERENCE.   |          |      |       |                     |
|---------------|-------------------|--------------------|------------------------------------|--------------|----------|------|-------|---------------------|
|               |                   |                    |                                    | Work.        | Vol.     | P.   | Pl.   | Figs.               |
| Orisk.        | $\frac{2660}{1}$  | Fig'd.             | <b>Hipparionyx</b> Vanuxem.        |              |          |      |       |                     |
|               |                   |                    | proximus ( <i>Vanux.</i> ) Hall.   | Pal. N. Y.   | 3        | 407  | 89    | 1a-4                |
|               |                   |                    | " " "                              | St. G. N. Y. | 2        | .... | 39    | 34, 35              |
|               |                   |                    | " " <i>H. &amp; C.</i>             | " "          | 11       | .... | 16    | 17, 19              |
|               |                   |                    | " " "                              | Pal. N. Y.   | 8, pt. I | 257  | 9     | 34, 35              |
| "             | "                 | "                  | " " Hall.                          | " "          | 3        | 407  | 90    | 1-7                 |
| "             | "                 | "                  | " " "                              | " "          | 3        | 407  | 91    | 4                   |
| "             | $\frac{2660}{4}$  | "                  | " " "                              | " "          | 3        | 482  | 95A   | 13, 14              |
| "             | "                 | "                  | " " "                              | St. G. N. Y. | 2        | .... | 39    | 33, <i>int.d.v.</i> |
| "             | "                 | "                  | " " <i>H. &amp; C.</i>             | Pal. N. Y.   | 8, pt. I | 257  | 9     | 33, "               |
| "             | "                 | "                  | " " Hall.                          | " "          | 3        | 481  | 95A   | 20, 21              |
| Mar.          | $\frac{4385}{1}$  | Type.              | <b>Leiorhynchus</b> Hall.....      |              |          |      |       |                     |
|               |                   |                    | dubium ..... Hall.                 | Pal. N. Y.   | 4        | 364  | 56    | 22-25               |
| Chem.         | $\frac{4570}{1}$  | Fig'd.             | " " <i>H. &amp; C.</i>             | " "          | 8, pt. 2 | .... | 59    | 6, 7                |
|               |                   |                    | globuliforme ( <i>Vanux.</i> ) H.  | " "          | 4        | 364  | 57    | 26, <i>int.d.v.</i> |
| Ham.          | $\frac{4571}{1}$  | Type.              | Kelloggi ..... Hall.               | " "          | 4        | 361  | 57    | 1-12                |
| Mar.          | $\frac{4383}{1}$  | Fig'd.             | " " <i>H. &amp; C.</i>             | " "          | 8, pt. 2 | 194  | 59    | 18-20               |
|               |                   |                    | limitare ( <i>Vanux.</i> ).. Hall. | " "          | 4        | 356  | 56    | 6-9                 |
| "             | "                 | "                  | " " "                              | " "          | 4        | 356  | 56    | 15-19               |
| Chem.         | $\frac{4572}{1}$  | Type.              | " " <i>H. &amp; C.</i>             | St. G. N. Y. | 13       | .... | 43    | 16, 17              |
|               |                   |                    | " " "                              | Pal. N. Y.   | 8, pt. 2 | 194  | 59    | 3-5                 |
| Chem.         | $\frac{4572}{1}$  | Type.              | mesacostale ..... Hall.            | Geol. N. Y.  | 4th D.   | .... | t. 67 | 1b, <i>v. v.</i>    |
|               |                   |                    | " " "                              | N. Y. S. M.  | 13       | 86   | ....  | 1b, "               |
| "             | $\frac{4572}{2}$  | "                  | " " <i>H. &amp; C.</i>             | Pal. N. Y.   | 4        | 362  | 57    | 19, "               |
|               |                   |                    | " " Hall.                          | " "          | 8, pt. 2 | 194  | 59    | 11, "               |
| "             | $\frac{4572}{3}$  | "                  | " " "                              | " "          | 4        | 362  | 57    | 18, 20, 22          |
| "             | $\frac{4572}{4}$  | "                  | " " "                              | " "          | 4        | 362  | 57    | 21, <i>d. v.</i>    |
| "             | $\frac{4572}{5}$  | "                  | " " "                              | " "          | 4        | 362  | 57    | 23, 25              |
| "             | $\frac{4572}{6}$  | "                  | " " <i>H. &amp; C.</i>             | St. G. N. Y. | 13       | .... | 43    | 21, <i>int.d.v.</i> |
| "             | $\frac{4572}{7}$  | "                  | " " "                              | Pal. N. Y.   | 8, pt. 2 | 194  | 59    | 12, "               |
| "             | $\frac{4572}{8}$  | "                  | " " Hall.                          | Geol. N. Y.  | 4th D.   | .... | t. 67 | I                   |
| "             | $\frac{4572}{9}$  | "                  | " " "                              | N. Y. S. M.  | 13       | 86   | ....  | I                   |
| "             | $\frac{4572}{10}$ | "                  | " " "                              | Pal. N. Y.   | 4        | 362  | 57    | 24, <i>v. v.</i>    |
| Ham.          | $\frac{4573}{1}$  | "                  | multicosta ..... Hall.             | N. Y. S. M.  | 13       | 85   |       |                     |
| "             | $\frac{4573}{2}$  | "                  | " " <i>H. &amp; C.</i>             | Pal. N. Y.   | 4        | 358  | 56    | 26, 27              |
|               |                   |                    | " " Hall.                          | " "          | 8, pt. 2 | 194  | 59    | 9, <i>d. v.</i>     |
| "             | $\frac{4573}{3}$  | "                  | " " "                              | " "          | 4        | 358  | 56    | 30-32               |
| "             | $\frac{4573}{4}$  | "                  | " " <i>H. &amp; C.</i>             | " "          | 8, pt. 2 | 194  | 59    | 8, <i>v. v.</i>     |
| "             | $\frac{4573}{5}$  | "                  | " " Hall.                          | " "          | 4        | 358  | 56    | 33, <i>d. v.</i>    |
| "             | $\frac{4573}{6}$  | "                  | " " "                              | " "          | 4        | 358  | 56    | 34, 35              |
| "             | $\frac{4573}{7}$  | "                  | " " "                              | " "          | 4        | 358  | 56    | 36-40               |
| "             | $\frac{4573}{8}$  | "                  | " " "                              | " "          | 4        | 358  | 63    | 26-29               |
| Mar.          | $\frac{4384}{1}$  | "                  | mysia ..... Hall.                  | " "          | 4        | 357  | 56    | 1-5                 |
| Chem.         | $\frac{4574}{1}$  | "                  | Newberryi ..... <i>H. &amp; W.</i> | N. Y. S. M.  | 23       | 240  | 11    | 26, 27              |
| Gen.          | $\frac{4575}{1}$  | Fig'd Sp. and G.T. | " " <i>H. &amp; C.</i>             | Pal. N. Y.   | 8, pt. 2 | 194  | 59    | 38, <i>card.</i>    |
|               |                   |                    | quadricostatum ( <i>Van.</i> ) H.  | " "          | 4        | 357  | 56    | 44-46               |
| "             | $\frac{4575}{2}$  | "                  | " " <i>H. &amp; C.</i>             | " "          | 8, pt. 2 | 193  | 59    | 22, <i>int.d.v.</i> |
| "             | "                 | "                  | " " Hall.                          | " "          | 4        | 357  | 56    | 47, 49              |
| Chem.         | $\frac{4576}{1}$  | Type.              | " " <i>H. &amp; C.</i>             | St. G. N. Y. | 13       | 827  | 43    | 22, <i>v. v.</i>    |
|               |                   |                    | " " "                              | Pal. N. Y.   | 8, pt. 2 | 193  | 69    | 21, "               |
| "             | "                 | "                  | sinuatum ..... Hall.               | " "          | 4        | 362  | 57    | 13-17               |
| U. H.         | $\frac{1520}{33}$ | Fig'd.             | <b>Leptaena</b> Dalman.            |              |          |      |       |                     |
|               |                   |                    | rhomboidalis ( <i>Wilck.</i> ) H.  | " "          | 4        | 76   | 12    | 17, <i>v. v.</i>    |
|               |                   |                    | " " "                              | St. G. N. Y. | 2        | .... | 38    | 28, "               |
| "             | "                 | "                  | " " <i>H. &amp; C.</i>             | Pal. N. Y.   | 8, pt. I | 279  | 8     | 28, "               |



| LOCALITY.                | REMARKS.                                                                                                                               |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| .....                    | As type of <i>Orthis hipparionyx</i> Hall.                                                                                             |
| .....                    | As <i>Streptorhynchus hipparionyx</i> .                                                                                                |
| Knox, N. Y.              | Three internal casts of dorsal valve and two of ventral.                                                                               |
| “ “                      | As type of <i>Orthis hipparionyx</i> Hall. Internal casts of one dorsal and four ventral valves. One of the latter retains some shell. |
| “ “                      | Figure 5 was made from a gutta percha squeeze.                                                                                         |
| .....                    | As type of <i>Orthis hipparionyx</i> Hall. Cast retaining some shell.                                                                  |
| .....                    | As type of <i>Strophodonta intermedia</i> Hall.                                                                                        |
| .....                    | As type of <i>Streptorhynchus hipparionyx</i> Hall.                                                                                    |
| Cumberland, Md.          | A silicified dorsal valve.                                                                                                             |
| “ “                      | As type of <i>Orthis cumberlandiæ</i> . Two silicified ventral valves.                                                                 |
| .....                    | Spelled <i>Liorhynchus</i> in Pal. N. Y., vol. 8, pt. 2.                                                                               |
| Schoharie Co. (?), N. Y. | Two somewhat exfoliated individuals.                                                                                                   |
| Cortland, N. Y.          | Internal cast of dorsal valve.                                                                                                         |
| Northern Ohio.           | Four exfoliated individuals and an internal cast.                                                                                      |
| Schoharie Co., N. Y.     | Two small individuals.                                                                                                                 |
| “ “                      | A large individual.                                                                                                                    |
| .....                    | As <i>Atrypa mesacostalis</i> .                                                                                                        |
| Steuben Co., N. Y.       | Cast of ventral valve from the southern part of the county.                                                                            |
| Near Ithaca, N. Y.       | Three casts imbedded separately.                                                                                                       |
| Cortland, N. Y.          | Internal cast of dorsal valve, imbedded.                                                                                               |
| Tompkins Co., N. Y.      | Internal casts of a dorsal and a ventral valve.                                                                                        |
| .....                    | As <i>Atrypa mesacostalis</i> .                                                                                                        |
| Near Ithaca, N. Y.       | Imperfect cast of large ventral valve from Fall Creek.                                                                                 |
| Chenango Co. (?), N. Y.  | Internal cast of ventral valve retaining shell at beak.                                                                                |
| Summit, N. Y.            | Two casts of dorsal valve in blocks with many others. Schoharie Co.                                                                    |
| Moscow, N. Y.            | A dorsal and two ventral valves, somewhat exfoliated, imbedded separately.                                                             |
| Owasco Lake, N. Y.       | A much exfoliated dorsal valve, imbedded.                                                                                              |
| Widder, Ont.             | A young individual of elongate form.                                                                                                   |
| Bosanquet, Ont.          | Large individual, somewhat exfoliated.                                                                                                 |
| Richmondville, N. Y.     | Internal cast.                                                                                                                         |
| Schoharie Co., N. Y.     | Three individuals.                                                                                                                     |
| Kelloggsville, O.        | Exfoliated ventral valve and vertically crushed int. cast of individ.                                                                  |
| Seneca Co., N. Y.        | Two int. casts and a dorsal valve, imbed. From Big Stream Creek.                                                                       |
| Cayuga Lake, N. Y.       | Two crushed internal casts, imbedded. From east shore of lake.                                                                         |
| Ithaca, N. Y.            | Three partly exfoliated individuals.                                                                                                   |
| .....                    | As <i>Strophomena rhomboidalis</i> .                                                                                                   |
| .....                    | “ “ “                                                                                                                                  |
| Near Buffalo, N. Y.      | An exfoliated ventral valve, imbedded.                                                                                                 |

Class BRACHIOPODA—Continued.

| Geol. Subdiv.        | Cat. No.                                                                                                                | Type or Fig'd Sp.                             | GENUS, SPECIES AND AUTHOR.                   | REFERENCE.   |          |       |        |                       |
|----------------------|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------------------------------|--------------|----------|-------|--------|-----------------------|
|                      |                                                                                                                         |                                               |                                              | Work.        | Vol.     | P.    | Pl.    | Figs.                 |
| U. H.<br>Orisk.<br>" | $\frac{1520}{30}$<br>$\frac{2665}{1}$<br>$\frac{2665}{2}$                                                               | Fig'd.<br>Type.<br>"                          | <b>Leptæna</b> Dalman— <i>Cont.</i>          |              |          |       |        |                       |
|                      |                                                                                                                         |                                               | rhomboidalis ( <i>Wilck.</i> ) <i>H.</i>     | Pal. N. Y.   | 4        | 76    | 12     | 18, <i>int. v. v.</i> |
|                      |                                                                                                                         |                                               | " <i>var. ventricosa H.</i>                  | " "          | 3        | 417   | 94     | 2e, f                 |
|                      |                                                                                                                         |                                               | " " " "                                      | N. Y. S. M.  | 10       | 55    | ....   | .....                 |
| Orisk.<br>"          | $\frac{2740}{1}$<br>$\frac{2739}{1}$                                                                                    | Type.<br>"                                    | " "                                          | Pal. N. Y.   | 3        | 417   | 94     | 3, <i>int. v. v.</i>  |
|                      |                                                                                                                         |                                               | <b>Leptocœlia</b> Hall.                      |              |          |       |        |                       |
|                      |                                                                                                                         |                                               | <i>acutiplicata</i> .....                    | .....        | .....    | ..... | .....  | .....                 |
|                      |                                                                                                                         |                                               | dichotoma..... <i>Hall.</i>                  | Pal. N. Y.   | 3        | 452   | 103 B  | 3a-c                  |
|                      |                                                                                                                         |                                               | fimbriata..... <i>Hall.</i>                  | " "          | 3        | 450   | 103 B  | 2a-d                  |
|                      |                                                                                                                         |                                               | " "                                          | " "          | 3        | 452   | ....   | 3                     |
|                      |                                                                                                                         |                                               | <i>H. &amp; C.</i>                           | St. G. N. Y. | 13       | ....  | 39     | 23, <i>d. v.</i>      |
|                      |                                                                                                                         |                                               | " "                                          | Pal. N. Y.   | 8, pt. 2 | 137   | 53     | 47, 50                |
|                      |                                                                                                                         |                                               | " "..... <i>Hall.</i>                        | " "          | 3        | 450   | 103 B  | 2e-g†                 |
|                      |                                                                                                                         |                                               | <i>H. &amp; C.</i>                           | St. G. N. Y. | 13       | ....  | 39     | 24, <i>int. d. v.</i> |
|                      |                                                                                                                         |                                               | " "                                          | Pal. N. Y.   | 8, pt. 2 | 137   | 53     | 52, "                 |
|                      |                                                                                                                         |                                               | " "                                          | " "          | 3        | 449   | 103 B  | 1a-c                  |
| "                    | $\frac{2673}{4}$                                                                                                        | Fig'd Sp.<br>and G. T.                        | flabellites ( <i>Con.</i> ).... <i>Hall.</i> | N. Y. S. M.  | 10       | 108   | ....   | .....                 |
|                      |                                                                                                                         |                                               | " "                                          | Pal. N. Y.   | 3        | 449   | 103 B  | 1a-c                  |
|                      |                                                                                                                         |                                               | <i>H. &amp; C.</i>                           | St. G. N. Y. | 13       | 804   | 39     | 18-20                 |
|                      |                                                                                                                         |                                               | " "                                          | Pal. N. Y.   | 8, pt. 2 | 136   | 53     | 40-42                 |
|                      |                                                                                                                         |                                               | " "..... <i>Hall.</i>                        | " "          | 3        | 449   | 103 B  | 1e, f                 |
|                      |                                                                                                                         |                                               | " "                                          | " "          | 3        | 452   | ....   | 1, 2                  |
|                      |                                                                                                                         |                                               | <i>H. &amp; C.</i>                           | St. G. N. Y. | 13       | 804   | 39     | 22, <i>int. d. v.</i> |
|                      |                                                                                                                         |                                               | " "                                          | Pal. N. Y.   | 8, pt. 2 | 136   | 53     | 43, "                 |
|                      |                                                                                                                         |                                               | " "..... <i>Hall.</i>                        | " "          | 3        | 449   | 106    | 1a-d                  |
|                      |                                                                                                                         |                                               | " ".....                                     | " "          | 3        | 449   | 106    | 1e, f                 |
|                      |                                                                                                                         |                                               | <i>propria</i> .....                         | .....        | .....    | ..... | .....  | .....                 |
|                      |                                                                                                                         |                                               | <b>Leptostrophia</b> H. & C.....             | .....        | .....    | ..... | .....  | .....                 |
| Ham.<br>Orisk.<br>"  | $\frac{4577}{1}$<br>$\frac{2663}{1}$<br>$\frac{2663}{2}$<br>$\frac{2663}{3}$<br>"                                       | Type.<br>Gen. and<br>Sp. Type.<br>"<br>"<br>" | junia..... <i>Hall.</i>                      | Pal. N. Y.   | 4        | 423   | ....   | .....                 |
|                      |                                                                                                                         |                                               | " "                                          | N. Y. S. M.  | 10       | 141   | ....   | .....                 |
|                      |                                                                                                                         |                                               | " "                                          | Pal. N. Y.   | 4        | 108   | 18     | 3a, <i>ext.</i>       |
|                      |                                                                                                                         |                                               | magnifica..... <i>Hall.</i>                  | N. Y. S. M.  | 10       | 54    | ....   | .....                 |
|                      |                                                                                                                         |                                               | " "                                          | Pal. N. Y.   | 3        | 414   | 93     | 4, <i>int. v. v.</i>  |
|                      |                                                                                                                         |                                               | " ".....                                     | " "          | 3        | 414   | 94     | 2c, d                 |
|                      |                                                                                                                         |                                               | " ".....                                     | " "          | 3        | 482   | 95A    | 15, 16                |
|                      |                                                                                                                         |                                               | " ".....                                     | " "          | 3        | 482   | 95A    | 17-19                 |
|                      |                                                                                                                         |                                               | " "                                          | St. G. N. Y. | 2        | ....  | 44     | 28, <i>int.</i>       |
|                      |                                                                                                                         |                                               | <i>H. &amp; C.</i>                           | " "          | 11       | 281   | 15     | 4, "                  |
|                      |                                                                                                                         |                                               | " "                                          | Pal. N. Y.   | 8, pt. 1 | 288   | 13     | 28, "                 |
|                      |                                                                                                                         |                                               | " "                                          | " "          | 4        | 92    | 12     | 15, "                 |
| U. H.<br>Ham.<br>"   | $\frac{2824}{8}$<br>$\frac{2824}{9}$<br>$\frac{2824}{10}$<br>$\frac{2824}{11}$<br>$\frac{2824}{12}$<br>$\frac{2824}{9}$ | Fig'd.<br>"<br>"<br>"<br>"<br>"               | perplana ( <i>Con.</i> ).... <i>Hall.</i>    | " "          | 4        | 98    | 17     | 1a, h                 |
|                      |                                                                                                                         |                                               | " ".....                                     | " "          | 4        | 98    | 17     | 1a, h                 |
|                      |                                                                                                                         |                                               | <i>H. &amp; C.</i>                           | " "          | 8, pt. 1 | 288   | 15     | 7, <i>int. v. v.</i>  |
|                      |                                                                                                                         |                                               | " "..... <i>Hall.</i>                        | N. Y. S. M.  | 10       | 143   | ....   | .....                 |
|                      |                                                                                                                         |                                               | " "                                          | Pal. N. Y.   | 4        | 98    | 17     | 1b, d                 |
|                      |                                                                                                                         |                                               | " "                                          | St. G. N. Y. | 2        | ....  | 46     | 3, <i>ext. v. v.</i>  |
|                      |                                                                                                                         |                                               | <i>H. &amp; C.</i>                           | " "          | 11       | ....  | 15     | 1, "                  |
|                      |                                                                                                                         |                                               | " "                                          | Pal. N. Y.   | 8, pt. 1 | 288   | 15     | 3, "                  |
|                      |                                                                                                                         |                                               | " "..... <i>Hall.</i>                        | " "          | 4        | 98    | 17     | 1c, "                 |
|                      |                                                                                                                         |                                               | " ".....                                     | " "          | 4        | 98    | 17     | 11, <i>int. v. v.</i> |
|                      |                                                                                                                         |                                               | " ".....                                     | Geol. 1a.    | 1, pt. 2 | 496   | 3      | 6a-c                  |
|                      |                                                                                                                         |                                               | <i>H. &amp; C.</i>                           | Pal. N. Y.   | 8, pt. 1 | ....  | 15     | 8, <i>int. d. v.</i>  |
| Chem.                | $\frac{2824}{13}$                                                                                                       | Type.                                         | " <i>var. nervosa Hall.</i>                  | Geol N. Y.   | 4th D.   | 266   | ct 120 | 1, 1a                 |
|                      |                                                                                                                         |                                               | " "                                          | Pal. N. Y.   | 4        | 113   | 19     | 14, <i>int. v. v.</i> |
|                      |                                                                                                                         |                                               | " "                                          | St. G. N. Y. | 2        | ....  | 46     | 17, "                 |
|                      |                                                                                                                         |                                               | <i>H. &amp; C.</i>                           | Pal. N. Y.   | 8, pt. 1 | ....  | 15     | 17, "                 |



| LOCALITY.            | REMARKS.                                                                                                       |
|----------------------|----------------------------------------------------------------------------------------------------------------|
| Stafford, N. Y.      | As <i>Strophomena rhomboidalis</i> . Int. cast ventr. valve w. some shell.                                     |
| Knox, N. Y.          | “ “ <i>rugosa</i> var. <i>ventricosa</i> . Internal cast dorsal valve.                                         |
| .....                | “ “ <i>depressa</i> var. <i>ventricosa</i> . Internal cast of ventral                                          |
| Schoharie, N. Y.     | valve, not entire.                                                                                             |
| .....                | See <i>Cælospira acutiplicata</i> .                                                                            |
| Cumberland, Md.      | A silicified individual.                                                                                       |
| “ “                  | Three silicified individuals. In the last reference the figures are enlargements to two, not three, diameters. |
| “ “                  | Two opposite valves, silicified.                                                                               |
| .....                | As types of <i>Leptocælia propria</i> H., and thus throughout this species.                                    |
| .....                | Genus established.                                                                                             |
| Near Cumberland, Md. | Two silicified individuals from 5 miles below the city.                                                        |
| “ “ “                | Two opposite valves, silicified, from preceding locality.                                                      |
| Schoharie, N. Y.     | An entire individual and an imbedded dorsal valve.                                                             |
| Knox, N. Y.          | An imbedded dorsal valve and the internal cast of another.                                                     |
| .....                | See <i>Leptocælia flabellites</i> .                                                                            |
| .....                | Defined by Hall & Clarke as a subgenus of <i>Stropheodonta</i> .                                               |
| .....                | Specific name given in the list of corrigenda.                                                                 |
| .....                | As <i>Strophomena</i> ( <i>Strophodonta</i> ) <i>textilis</i> .                                                |
| York, N. Y.          | A large ventral valve imbedded.                                                                                |
| .....                | As <i>Strophomena</i> ( <i>Strophodonta</i> ) <i>magnifica</i> .                                               |
| Schoharie, N. Y.     | As <i>Strophodonta magna</i> . Internal cast of large ventral valve.                                           |
| Knox, N. Y.          | “ “ “ Very perf. int. casts of two dors. valves.                                                               |
| Cumberland, Md.      | “ “ “ Two silicified individuals.                                                                              |
| .....                | “ “ “                                                                                                          |
| .....                | “ “ “                                                                                                          |
| Cumberland, Md.      | Two silicified ventral valves.                                                                                 |
| Southern Indiana.    | As <i>Strophodonta perplana</i> . Internal cast ventral valve. External imprint of same is present.            |
| .....                | As <i>Strophodonta perplana</i> .                                                                              |
| Rock Island, Ill.    | Two ventral valves. The larger lacks its beak.                                                                 |
| .....                | As type of <i>Strophomena</i> ( <i>Strophodonta</i> ) <i>fragilis</i> Hall.                                    |
| .....                | As <i>Strophodonta perplana</i> .                                                                              |
| .....                | “ “ “                                                                                                          |
| 18 Mile Creek, N. Y. | Two opposite valves, imbedded separately.                                                                      |
| Covington, N. Y.     | As <i>Strophodonta perplana</i> . Ventral valve imbedded.                                                      |
| Baileytown, N. Y.    | “ “ “ Internal cast of ventral valve. Locality is on Seneca lake.                                              |
| .....                | As type of <i>Strophodonta fragilis</i> Hall.                                                                  |
| Rock Island, Ill.    | Two dorsal valves.                                                                                             |
| .....                | As type of <i>Strophomena nervosa</i> .                                                                        |
| .....                | As <i>Strophodonta perplana</i> var. <i>nervosa</i> .                                                          |
| .....                | “ “ “ “                                                                                                        |
| Steuben Co., N. Y.   | Internal cast ventral valve, from 4 miles north of Bath.                                                       |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.          | Type or Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.                        | REFERENCE.   |          |      |      |                       |
|---------------|-------------------|---------------------|---------------------------------------------------|--------------|----------|------|------|-----------------------|
|               |                   |                     |                                                   | Work.        | Vol.     | P.   | Pl.  | Figs.                 |
| Chem.         | $\frac{2824}{14}$ | Type.               | <b>Leptostrophia</b> H. & C.— <i>Cont.</i>        |              |          |      |      |                       |
|               |                   |                     | <i>perplana</i> var. <i>nervosa</i> ... <i>H.</i> | Pal. N. Y.   | 4        | 113  | 19   | 15, 16                |
|               |                   |                     | " " " " " " <i>H. &amp; C.</i>                    | St. G. N. Y. | 2        | .... | 46   | 14, 15                |
|               |                   |                     | " " " " " " <i>Hall.</i>                          | Pal. N. Y.   | 8, pt. 1 | .... | 15   | 14, 15                |
| "             | $\frac{2824}{15}$ | "                   | " " " " " " <i>Hall.</i>                          | " "          | 4        | 113  | 19   | 18, <i>int. v. v.</i> |
| "             | $\frac{2824}{16}$ | "                   | " " " " " " "                                     | " "          | 4        | 113  | 19   | 19, "                 |
| Ham. U. H.    | $\frac{4578}{1}$  | Type.               | <b>Lingula</b> Bruguière.                         |              |          |      |      |                       |
|               |                   |                     | <i>alveata</i> .....                              |              |          |      |      |                       |
|               |                   |                     | <i>densa</i> ..... <i>Hall.</i>                   | Pal. N. Y.   | 4        | 11   | 2    | 10, 11                |
|               |                   |                     | <i>desiderata</i> ..... <i>Hall.</i>              | N. Y. S. M.  | 16       | 19   |      |                       |
| Ham.          | $\frac{4579}{1}$  | Type.               | " " " " " " "                                     | Pal. N. Y.   | 4        | 6    | 2    | 2 <i>enl.</i> × 2     |
|               |                   |                     | <i>exilis</i> .....                               |              |          |      |      |                       |
|               |                   |                     | <i>leana</i> ..... <i>Hall.</i>                   | N. Y. S. M.  | 16       | 20   |      |                       |
|               |                   |                     | " " " " " " "                                     | Pal. N. Y.   | 4        | 9    | 2    | 12, <i>v. v.</i>      |
| "             | $\frac{4580}{1}$  | "                   | <i>ligea</i> ..... <i>Hall.</i>                   | N. Y. S. M.  | 13       | 76   |      |                       |
| "             | $\frac{4581}{1}$  | "                   | " " " " " " "                                     | Pal. N. Y.   | 4        | 7    | 1    | 2a, b                 |
| Mar.          | $\frac{3029}{2}$  | "                   | <i>maida</i> ..... <i>Hall.</i>                   | N. Y. S. M.  | 16       | 20   |      |                       |
|               |                   |                     | " " " " " " "                                     | Pal. N. Y.   | 4        | 9    | 2    | 13, <i>v. ? v.</i>    |
|               |                   |                     | <i>Manni</i> ..... <i>Hall.</i>                   | N. Y. S. M.  | 16       | 20   |      |                       |
|               |                   |                     | " " " " " " "                                     | Pal. N. Y.   | 4        | 6    | 2    | 3, <i>ext.</i>        |
| Gen.          | $\frac{4582}{1}$  | Fig'd.              | <i>palæformis</i> .....                           |              |          |      |      |                       |
|               |                   |                     | <i>spatulata</i> ( <i>Vanux.</i> ) <i>Hall.</i>   | Pal. N. Y.   | 4        | 13   | 1    | 1a, b                 |
|               |                   |                     | " " " " " " <i>H. &amp; C.</i>                    | " "          | 8, pt. 1 | .... | 1    | 15, <i>enl.</i> × 6   |
|               |                   |                     | <b>Lingulella</b> Salter.                         |              |          |      |      |                       |
| Ham.          | $\frac{4583}{1}$  | Type.               | ? <i>paliformis</i> ..... <i>Hall.</i>            | N. Y. S. M.  | 13       | 76   | .... | 1                     |
|               |                   |                     | " " " " " " "                                     | Pal. N. Y.   | 4        | 8    | 1    | 7                     |
|               |                   |                     | <b>Lingulodiscina</b> Whitfield.                  |              |          |      |      |                       |
|               |                   |                     | <i>exilis</i> ..... <i>Hall.</i>                  | Pal. N. Y.   | 4        | 7    | 1    | 9                     |
| "             | "                 | Gen. and Sp. Type.  | " " " " " " <i>Whitf.</i>                         | A. M. N. H.  | 3        | 122  | .... | 8                     |
| "             | "                 | Fig'd Sp. and G. T. | " ( <i>Hall</i> )..... "                          | " "          | 3        | 122  | .... | 1-7                   |
| "             | "                 | Fig'd.              | " " " " " " <i>Hall.</i>                          | Pal. N. Y.   | 4        | 19   | 2    | 22                    |
| Orisk.        | $\frac{2685}{2}$  | Type.               | <i>Liorhynchus</i> .....                          |              |          |      |      |                       |
|               |                   |                     | <b>Megalanteris</b> Suess.....                    |              |          |      |      |                       |
|               |                   |                     | <i>ovalis</i> ..... <i>Hall.</i>                  | N. Y. S. M.  | 10       | 101  | .... |                       |
|               |                   |                     | " " " " " " "                                     | Pal. N. Y.   | 3        | 458  | 106  | 2b, c                 |
| "             | "                 | "                   | " " " " " " "                                     | " "          | 3        | 458  | 106  | 2d-g, i-l             |
| "             | "                 | "                   | " " " " " " <i>H. &amp; C.</i>                    | St. G. N. Y. | 13       | .... | 51   | 8-10                  |
| "             | "                 | "                   | " " " " " " "                                     | Pal. N. Y.   | 8, pt. 2 | 280  | 77   | 12-14                 |
| "             | "                 | "                   | " " " " " " <i>Hall.</i>                          | " "          | 3        | 458  | 106  | 2h, <i>int. v. v.</i> |
| Mar.          | $\frac{4380}{1}$  | Type.               | <i>Meganteris</i> .....                           |              |          |      |      |                       |
|               |                   |                     | <i>cumberlandiæ</i> .....                         |              |          |      |      |                       |
|               |                   |                     | <i>ovalis</i> .....                               |              |          |      |      |                       |
|               |                   |                     | <i>ovoides</i> .....                              |              |          |      |      |                       |
| Mar.          | $\frac{4380}{1}$  | Type.               | <i>Suessana</i> .....                             |              |          |      |      |                       |
|               |                   |                     | <b>Merista</b> Suess.                             |              |          |      |      |                       |
|               |                   |                     | <i>lata</i> .....                                 |              |          |      |      |                       |
|               |                   |                     | <b>Meristella</b> Hall.                           |              |          |      |      |                       |
| "             | "                 | "                   | <i>Barrisi</i> ..... <i>Hall.</i>                 | N. Y. S. M.  | 13       | 84   |      |                       |
| "             | "                 | "                   | " " " " " " "                                     | Pal. N. Y.   | 4        | 304  | 49   | 5, 8-20               |
| "             | "                 | "                   | " " " " " " <i>H. &amp; C.</i>                    | " "          | 8, pt. 2 | 78   | 43   | 25, 26                |
| "             | "                 | "                   | " " " " " " <i>Hall.</i>                          | " "          | 4        | 304  | 49   | 21, 22                |
| "             | "                 | "                   | " " " " " " <i>H. &amp; C.</i>                    | " "          | 8, pt. 2 | 78   | 44   | 29, 30                |



| LOCALITY.            | REMARKS.                                                                                                           |
|----------------------|--------------------------------------------------------------------------------------------------------------------|
| .....                | As <i>Strophodonta perplana</i> var. <i>nervosa</i> .                                                              |
| .....                | “ “ “ “                                                                                                            |
| Painted Post, N. Y.  | Part of a large ventral valve, imbedded.                                                                           |
| Near Blossburg, Pa.  | As <i>Strophodonta perplana</i> var. <i>nervosa</i> . Part of an internal cast.                                    |
| Ithaca, N. Y.        | “ “ “ “ Internal cast of ventral valve.                                                                            |
| .....                | See <i>Dignomia alveata</i> .                                                                                      |
| Summit, N. Y.        | Two opposite valves imbedded together. Schoharie county.                                                           |
| Ontario Co., N. Y.   | Int. cast dorsal (?) valve and the shell. From “Lapham’s Mill.”                                                    |
| .....                | See <i>Lingulodiscina exilis</i> .                                                                                 |
| North Bristol, N. Y. | Exfoliated ventral valve, imbedded. Referred to genus <i>Glossina</i> by Schuchert, Syn. Am. Foss. Brach., p. 224. |
| Seneca Lake, N. Y.   | Two valves on same block.                                                                                          |
| Moscow, N. Y.        | Cast of ventral (?) valve retaining some shell.                                                                    |
| Delaware Co., O.     | A single valve, imbedded.                                                                                          |
| .....                | See <i>Lingulella paliiformis</i> .                                                                                |
| Seneca Lake, N. Y.   | Imbedded. From Big Stream Point.                                                                                   |
| .....                | As <i>Lingula palæformis</i> .                                                                                     |
| Pine Valley, N. Y.   | “ “ “ “ Exfoliated ventral (?) valve, imbedded.                                                                    |
| .....                | Found loose.                                                                                                       |
| .....                | As <i>Lingula exilis</i> .                                                                                         |
| Fultonham, N. Y.     | Individual attached to a <i>Modiomorpha concentrica</i> .                                                          |
| “ “                  | Four individuals, two of which are imbedded.                                                                       |
| Hamilton, N. Y.      | As types of <i>Discina doria</i> . Group of 4 indiv. on a <i>Pleurotomaria</i> .                                   |
| .....                | See <i>Leiorhynchus</i> .                                                                                          |
| .....                | This form of the name was introduced by Oehlert in 1887.                                                           |
| .....                | As <i>Megalanteris ovalis</i> .                                                                                    |
| Schoharie, N. Y.     | As <i>Rensselaeria ovalis</i> . A much exfoliated individual.                                                      |
| .....                | “ “ “ “                                                                                                            |
| Schoharie, N. Y.     | Three entire internal casts and two imperfect ones.                                                                |
| “ “                  | As <i>Rensselaeria ovalis</i> . Internal cast of ventral valve.                                                    |
| .....                | See <i>Megalanteris</i> .                                                                                          |
| .....                | “ <i>Rensselaeria cumberlandiæ</i> .                                                                               |
| .....                | “ <i>Megalanteris ovalis</i> .                                                                                     |
| .....                | “ <i>Rensselaeria ovoides</i> .                                                                                    |
| .....                | “ <i>Beachia Suessana</i> .                                                                                        |
| .....                | See <i>Meristella lata</i> .                                                                                       |
| Near LeRoy, N. Y.    | Eight somewhat exfoliated individuals.                                                                             |
| “ “                  | Two internal casts of individuals.                                                                                 |

## Class BRACHIOPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.    | REFERENCE.   |          |      |        |                |
|------------------|------------------|-----------------------|-------------------------------|--------------|----------|------|--------|----------------|
|                  |                  |                       |                               | Work.        | Vol.     | P.   | Pl.    | Figs.          |
|                  |                  |                       | <b>Meristella Hall—Cont.</b>  |              |          |      |        |                |
| U. H.            | $\frac{3071}{1}$ | Type.                 | doris.....Hall.               | N. Y. S. M.  | 13       | 84   |        |                |
|                  |                  |                       | "                             | Pal. N. Y.   | 4        | 303  | 50     | 3-10           |
|                  |                  |                       | H. & C.                       | " "          | 8, pt. 2 | 78   | 43     | 21, 22         |
| "                | "                | "                     | ".....Hall.                   | " "          | 4        | 303  | 50     | 12             |
|                  |                  |                       | <i>elissa</i> .....           |              |          |      |        |                |
| Ham.             | $\frac{4585}{1}$ | Type.                 | Haskinsi.....Hall.            | N. Y. S. M.  | 13       | 84   |        |                |
|                  |                  |                       | "                             | Pal. N. Y.   | 4        | 306  | 49     | 35             |
| Orisk.           | $\frac{2671}{1}$ | "                     | lata.....Hall.                | " "          | 3        | 431  | 101    | 3a-f           |
| "                | "                | "                     | "....."                       | " "          | 3        | 431  | 101    | 3g-m           |
| Ham.             | $\frac{4585}{1}$ | "                     | meta.....Hall.                | " "          | 4        | 308  | 49     | 1-4            |
|                  |                  |                       | H. & C.                       | " "          | 8, pt. 2 | 78   | 43     | 29, 30         |
| U. H.            | $\frac{2834}{7}$ | Fig'd.                | nasuta (Con.).....Hall.       | N. Y. S. M.  | 15       | 160  | 3      | 17-20          |
|                  |                  |                       | "                             | Pal. N. Y.   | 4        | 299  | 48     | 7-14           |
|                  |                  |                       | H. & C.                       | " "          | 8, pt. 2 | 78   | 43     | 18 d. v.       |
| Scho.            | $\frac{2834}{2}$ | "                     | " ".....Hall.                 | " "          | 4        | 299  | 48     | 4, int. v. v.  |
| U. H.            | $\frac{2834}{9}$ | "                     | " "....."                     | " "          | 4        | 299  | 48     | 18, "          |
|                  |                  |                       | H. & C.                       | " "          | 8, pt. 2 | 78   | 44     | 21, "          |
| "                | $\frac{2834}{8}$ | "                     | " ".....Hall.                 | " "          | 4        | 299  | 48     | 19, int.       |
|                  |                  |                       | H. & C.                       | " "          | 8, pt. 2 | 78   | 44     | 20, "          |
| Scho.            | $\frac{2834}{3}$ | "                     | " ".....Hall.                 | N. Y. S. M.  | 14       | 100  | ....   | ....           |
|                  |                  |                       | "                             | " "          | 15       | 160  | 3      | 21, 22         |
|                  |                  |                       | "                             | Pal. N. Y.   | 4        | 299  | 48     | 23-25          |
|                  |                  |                       | H. & C.                       | St. G. N. Y. | 13       | .... | 34     | 8, 9           |
|                  |                  |                       | "                             | Pal. N. Y.   | 8, pt. 2 | 78   | 43     | 19, 20         |
|                  |                  |                       | <i>unisulcata</i> .....       |              |          |      |        |                |
|                  |                  |                       | <b>Metaplasia H. &amp; C.</b> |              |          |      |        |                |
| Orisk.           | $\frac{2670}{3}$ | Gen. and<br>Sp. Type. | pyxidata.....Hall.            | Pal. N. Y.   | 3        | 428  | 100    | 9a-10          |
|                  |                  |                       | H. & C.                       | " "          | 8, pt. 2 | 56   | ....   | ....           |
| "                | $\frac{2670}{1}$ | "                     | ".....Hall.                   | " "          | 3        | 428  | 100    | 12, int. d. v. |
|                  |                  |                       | <b>Newberria Hall.</b>        |              |          |      |        |                |
| Ham.             | $\frac{4586}{1}$ | "                     | johannis.....Hall.            | " "          | 4        | 385  | 58a    | 9-15           |
|                  |                  |                       | "                             | Can. Pal.    | 1        | 236  | ....   | ....           |
|                  |                  |                       | "                             | St. G. N. Y. | 10       | 94   | 6      | 1, 5-9         |
|                  |                  |                       | H. & C.                       | Pal. N. Y.   | 8, pt. 2 | 262  | 78     | 14-16          |
| "                | "                | "                     | ".....Hall.                   | " "          | 4        | 385  | 58a    | 18, ext. v. v. |
|                  |                  |                       | "                             | St. G. N. Y. | 10       | 94   | 6      | 4, "           |
| "                | "                | "                     | "....."                       | Pal. N. Y.   | 4        | 385  | 58a    | 20, int. v. v. |
|                  |                  |                       | "                             | St. G. N. Y. | 10       | 94   | 6      | 3, "           |
|                  |                  |                       | H. & C.                       | " "          | 13       | 853  | 51     | 17, "          |
|                  |                  |                       | "                             | Pal. N. Y.   | 8, pt. 2 | 262  | 78     | 10, "          |
|                  |                  |                       | <b>Nucleospira Hall.</b>      |              |          |      |        |                |
| "                | $\frac{4587}{1}$ | Type.                 | concinna.....Hall.            | Geol. N. Y.  | 4th D.   | 200  | ct. 80 | 3              |
|                  |                  |                       | "                             | Pal. N. Y.   | 4        | 279  | 45     | 42-46          |
|                  |                  |                       | H. & C.                       | St. G. N. Y. | 13       | .... | 38     | 31, 34         |
|                  |                  |                       | "                             | Pal. N. Y.   | 8, pt. 2 | 145  | 48     | 13-16          |
| "                | $\frac{4587}{2}$ | "                     | ".....Hall.                   | " "          | 4        | 279  | 45     | 36, d. v.      |
| "                | $\frac{4587}{3}$ | "                     | "....."                       | " "          | 4        | 279  | 45     | 38-41, 58      |
|                  |                  |                       | H. & C.                       | St. G. N. Y. | 13       | .... | 38     | 30, d. v.      |
|                  |                  |                       | "                             | Pal. N. Y.   | 8, pt. 2 | 145  | 48     | 12, 25         |
| "                | $\frac{4587}{4}$ | "                     | ".....Hall.                   | " "          | 4        | 279  | 45     | 47-49          |
|                  |                  |                       | H. & C.                       | St. G. N. Y. | 13       | .... | 38     | 35             |
|                  |                  |                       | "                             | Pal. N. Y.   | 8, pt. 2 | 145  | 48     | 30, 31         |



| LOCALITY.                                            | REMARKS.                                                                                                                                                                                                                                    |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nr. Williamsville, N. Y.<br>" " "<br>.....           | Four exfoliated individuals from Young's quarry.<br>Upper half of an internal cast from Young's quarry.<br>See <i>Meristella nasuta</i> .                                                                                                   |
| 18 Mile Creek, N. Y.<br>Knox, N. Y.<br>" "           | Internal cast of ventral valve.<br>As <i>Merista lata</i> . An imbedded ventral valve and two individuals.<br>One of the latter is much exfoliated.<br>As <i>Merista lata</i> . Two internal casts of individuals and one of ventral valve. |
| Delphi, N. Y.                                        | An entire adult.                                                                                                                                                                                                                            |
| Williamsville, N. Y.<br>Albany Co., N. Y.            | Five more or less exfoliated individuals.<br>Internal cast of ventral valve, imbedded.                                                                                                                                                      |
| Near Delaware, O.                                    | A somewhat broken ventral valve.                                                                                                                                                                                                            |
| Near Columbus, O.<br>.....<br>.....                  | Etched specimen. Has been broken since figure was made.<br>As type of <i>Meristella elissa</i> Hall.<br>Somewhat doubtfully referred to <i>M. nasuta</i> .                                                                                  |
| Albany Co., N. Y.<br>.....                           | A large, partly exfoliated individual.<br>See <i>Pentagonia unisulcata</i> .                                                                                                                                                                |
| .....<br>Cumberland, Md.<br>Schoharie, N. Y.         | As <i>Spirifer pyxidatus</i> .<br>Genus <i>Metaplasia</i> established. An individual and two ventral valves, silicified.<br>As <i>Spirifer pyxidatus</i> . Internal cast of dorsal valve.                                                   |
| .....<br>.....                                       | As <i>Rensselæria</i> (?) <i>johanni</i> .<br>Gen. <i>Newberria</i> proposed by Prof. Hall in a letter to J. F. Whiteaves.                                                                                                                  |
| Waterloo, Iowa.<br>.....<br>Waterloo, Iowa.<br>..... | Four more or less crushed and exfoliated individuals.<br>As <i>Rensselæria</i> (?) <i>johanni</i> .<br>A broad ventral valve, imbedded.<br>As <i>Rensselæria</i> (?) <i>johanni</i> .                                                       |
| Waterloo, Iowa.<br>.....                             | Upper portion of individual showing cast of ventral valve.<br><br>As <i>Atrypa concinna</i> .                                                                                                                                               |
| Moscow, N. Y.<br>Canandaigua L., N. Y.               | A normal individual which has lost the surface spines.<br>Entire individual.                                                                                                                                                                |
| York, N. Y.                                          | Three individuals, two of which retain parts of the spinulose surface.                                                                                                                                                                      |
| Genesee Co., N. Y.                                   | A well-preserved dorsal valve.                                                                                                                                                                                                              |

Class BRACHIOPODA—Continued.

| Geol.<br>Subdiv.                  | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.            | REFERENCE.   |          |      |        |                       |
|-----------------------------------|------------------|----------------------|---------------------------------------|--------------|----------|------|--------|-----------------------|
|                                   |                  |                      |                                       | Work.        | Vol.     | P.   | Pl.    | Figs.                 |
| Ham.                              | $\frac{4587}{5}$ | Type.                | <b>Nucleospira</b> Hall— <i>Cont.</i> |              |          |      |        |                       |
|                                   |                  |                      | concinna . . . . . Hall.              | Pal. N. Y.   | 4        | 279  | 45     | 50, 51                |
|                                   |                  |                      | H. & C.                               | St. G. N. Y. | 13       | .... | 38     | 33, <i>enl.</i> X 5   |
|                                   |                  |                      | "                                     | Pal. N. Y.   | 8, pt. 2 | 145  | 48     | 17, 32                |
|                                   |                  |                      | "                                     | "            | 4        | 279  | 45     | 52                    |
| "                                 | $\frac{4587}{4}$ | "                    | "                                     | "            | 4        | 279  | 45     | 54, <i>int. v. v.</i> |
| "                                 | $\frac{4587}{6}$ | "                    | "                                     | "            | 4        | 279  | 45     | 55, " <i>d. v.</i>    |
| "                                 | $\frac{4587}{7}$ | "                    | "                                     | "            | 4        | 279  | 45     |                       |
| <b>Orbicula</b> Cuvier.           |                  |                      |                                       |              |          |      |        |                       |
| <i>lodensis</i> . . . . .         |                  |                      |                                       |              |          |      |        |                       |
| <i>minuta</i> . . . . .           |                  |                      |                                       |              |          |      |        |                       |
| <b>Orbiculoidea</b> d'Orbigny.    |                  |                      |                                       |              |          |      |        |                       |
| Chem.                             | $\frac{4588}{1}$ | Type.                | allegghania . . . . . Hall.           | N. Y. S. M.  | 13       | 77   | ....   | 1, 1a                 |
| Orisk.                            | $\frac{2657}{1}$ | "                    | "                                     | Pal. N. Y.   | 4        | 25   | I      | 17a, b                |
|                                   |                  |                      | ampla . . . . . Hall.                 | "            | 4        | 17   | ....   |                       |
|                                   |                  |                      | "                                     | "            | 3        | 406  | 92     | 1a, c, d              |
| Ham.                              | $\frac{4589}{1}$ | "                    | doria . . . . . Hall.                 | "            | 4        | 19   | 2      | 21, <i>enl.</i> X 2   |
| Chem.                             | $\frac{4590}{1}$ | "                    | elmira . . . . . Hall.                | "            | 4        | 24   | 2      | 38, 39                |
| Gen.                              | $\frac{4591}{1}$ | Fig'd.               | lodensis ( <i>Vanux.</i> ) . . Hall.  | "            | 4        | 22   | I      | 14a, e                |
| Ham.                              | $\frac{4591}{3}$ |                      | "                                     | "            | "        | 4    | 22     | I                     |
| Gen.                              | $\frac{4591}{2}$ | "                    | "                                     | "            | 4        | 22   | I      | 14d, f                |
| Chem.                             | $\frac{4592}{1}$ | Type.                | media . . . . . Hall.                 | "            | 4        | 20   | 2      | 28, <i>v. v.</i>      |
| Mar.                              | $\frac{4373}{1}$ | "                    | H. & C.                               | St. G. N. Y. | 11       | .... | 5      | 13, "                 |
|                                   |                  |                      | "                                     | Pal. N. Y.   | 8, pt. 1 | 125  | 4E     | 16, "                 |
|                                   |                  |                      | minuta . . . . . Hall.                | Geol. N. Y.  | 4th D.   | 182  | ct. 71 | 9                     |
| Ham.                              | $\frac{4593}{1}$ | "                    | "                                     | Pal. N. Y.   | 4        | 16   | I      | 16a, b                |
|                                   |                  |                      | seneca . . . . . Hall.                | "            | 4        | 20   | 2      | 23, 24                |
|                                   |                  |                      | truncata . . . . . Hall.              | "            | 4        | 23   | I      | 15a, b                |
| Gen.                              | $\frac{4594}{1}$ | "                    |                                       |              |          |      |        |                       |
| <b>Orthis</b> Dalman.             |                  |                      |                                       |              |          |      |        |                       |
| <i>æquivalvis</i> . . . . .       |                  |                      |                                       | N. Y. S. M.  | 10       | 109  | ....   |                       |
| <i>carinata</i> . . . . .         |                  |                      |                                       |              |          |      |        |                       |
| <i>cleobis</i> . . . . .          |                  |                      |                                       |              |          |      |        |                       |
| <i>cumberlandiæ</i> . . . . .     |                  |                      |                                       |              |          |      |        |                       |
| <i>cyclas</i> . . . . .           |                  |                      |                                       |              |          |      |        |                       |
| <i>eboracensis</i> . . . . .      |                  |                      |                                       |              |          |      |        |                       |
| <i>eryna</i> . . . . .            |                  |                      |                                       |              |          |      |        |                       |
| <i>hipparionyx</i> . . . . .      |                  |                      |                                       |              |          |      |        |                       |
| <i>idas</i> . . . . .             |                  |                      |                                       |              |          |      |        |                       |
| <i>impressa</i> . . . . .         |                  |                      |                                       |              |          |      |        |                       |
| <i>interlineata</i> . . . . .     |                  |                      |                                       |              |          |      |        |                       |
| <i>iowensis</i> . . . . .         |                  |                      |                                       |              |          |      |        |                       |
| " var. <i>furnarius</i> . . . . . |                  |                      |                                       |              |          |      |        |                       |
| <i>lenticularis</i> . . . . .     |                  |                      |                                       |              |          |      |        |                       |
| <i>leonensis</i> . . . . .        |                  |                      |                                       |              |          |      |        |                       |
| <i>lepida</i> . . . . .           |                  |                      |                                       |              |          |      |        |                       |
| <i>leucosia</i> . . . . .         |                  |                      |                                       |              |          |      |        |                       |
| <i>musculosa</i> . . . . .        |                  |                      |                                       |              |          |      |        |                       |
| <i>nucleus</i> . . . . .          |                  |                      |                                       |              |          |      |        |                       |
| <i>penelope</i> . . . . .         |                  |                      |                                       |              |          |      |        |                       |
| <i>perversa</i> . . . . .         |                  |                      |                                       |              |          |      |        |                       |
| <i>planoconvexa</i> . . . . .     |                  |                      |                                       |              |          |      |        |                       |
| <i>præumbona</i> . . . . .        |                  |                      |                                       |              |          |      |        |                       |
| <i>propinqua</i> . . . . .        |                  |                      |                                       |              |          |      |        |                       |
| <i>suborbicularis</i> . . . . .   |                  |                      |                                       |              |          |      |        |                       |
| <i>subumbona</i> . . . . .        |                  |                      |                                       |              |          |      |        |                       |



| LOCALITY.             | REMARKS.                                                                                                                    |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Darien, N. Y.         | An entire ventral valve.                                                                                                    |
| Genesee Co., N. Y.    | Individual with dorsal valve removed to show the spires.                                                                    |
| Hardy Co., Va.        | Internal cast of conjoined valves.                                                                                          |
| Near Apulia, N. Y.    | " " "                                                                                                                       |
| .....                 | See <i>Orbiculoidea lodensis</i> .                                                                                          |
| .....                 | " " <i>minuta</i> .                                                                                                         |
| .....                 | As <i>Discina alleghania</i> .                                                                                              |
| Nr. Belvidere, N. Y.  | " " " Very perfect dorsal valve, imbedded.                                                                                  |
| .....                 | " " <i>ampla</i> , in foot-note.                                                                                            |
| Knox, N. Y.           | " " <i>grandis</i> Vanuxem. External imprint of a dorsal valve and the internal cast of both valves of the same individual. |
| Seneca Lake, N. Y.    | As <i>Discina doria</i> . An upper valve, imbedded. Fr. the "East shore." See also <i>Lingulodiscina exilis</i> .           |
| Nr. Wellsborough, Pa. | As <i>Discina elmira</i> . Imbedded cast with apex worn off.                                                                |
| Near Lodi, N. Y.      | " " <i>lodensis</i> . Opposite valves, imbedded separately.                                                                 |
| Seneca Lake, N. Y.    | " " " Imprint of dorsal valve. The associated fossils show the specimen to be from the Hamilton bed.                        |
| " "                   | As <i>Discina lodensis</i> . Two ventral valves, imbedded. From Big Stream Point.                                           |
| .....                 | As <i>Discina media</i> .                                                                                                   |
| Troupsburg, N. Y.     | Internal cast of ventral valve retaining some shell.                                                                        |
| .....                 | As <i>Orbicula minuta</i> .                                                                                                 |
| Avon, N. Y.           | " <i>Discina</i> " Dorsal valve, imbedded.                                                                                  |
| Seneca Lake, N. Y.    | " " <i>seneca</i> . Dorsal valve, imbedded. From near Lodi.                                                                 |
| " "                   | " " <i>truncata</i> . Dorsal valve, imbedded.                                                                               |
| .....                 | See <i>Rhipidomella eryna</i> .                                                                                             |
| .....                 | " <i>Schizophoria carinata</i> .                                                                                            |
| .....                 | " <i>Rhipidomella cleobis</i> .                                                                                             |
| .....                 | " <i>Hipparionyx proximus</i> .                                                                                             |
| .....                 | " <i>Rhipidomella cyclas</i> .                                                                                              |
| .....                 | " <i>Dalmanella lentiiformis</i> , remark.                                                                                  |
| .....                 | " <i>Rhipidomella eryna</i> .                                                                                               |
| .....                 | " <i>Hipparionyx proximus</i> .                                                                                             |
| .....                 | " <i>Rhipidomella eryna</i> .                                                                                               |
| .....                 | " <i>Schizophoria impressa</i> .                                                                                            |
| .....                 | " " <i>interlineata</i> and <i>S. tioga</i> .                                                                               |
| .....                 | " " <i>iorwensis</i> .                                                                                                      |
| .....                 | " " " var. <i>furnarius</i> .                                                                                               |
| .....                 | " <i>Dalmanella lenticularis</i> .                                                                                          |
| .....                 | " " <i>leonensis</i> .                                                                                                      |
| .....                 | " " <i>lepida</i> .                                                                                                         |
| .....                 | " <i>Rhipidomella leucosia</i> .                                                                                            |
| .....                 | " " <i>musculosa</i> .                                                                                                      |
| .....                 | " <i>Ambocælia umbonata</i> .                                                                                               |
| .....                 | " <i>Rhipidomella penelope</i> and <i>R. leucosia</i> .                                                                     |
| .....                 | " <i>Orthothetes chemungensis</i> , var. <i>perversus</i> .                                                                 |
| .....                 | " <i>Dalmanella planoconvexa</i> .                                                                                          |
| .....                 | " <i>Ambocælia præumbona</i> .                                                                                              |
| .....                 | " <i>Schizophoria propinqua</i> and <i>S. impressa</i> .                                                                    |
| .....                 | " <i>Rhipidomella suborbicularis</i> .                                                                                      |
| .....                 | " <i>Spirifer subumbona</i> .                                                                                               |

Class BRACHIOPODA—*Continued.*

| Geol. Subdiv. | Cat. No.          | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                                        | REFERENCE.   |          |      |        |                |
|---------------|-------------------|--------------------|-----------------------------------------------------------------------------------|--------------|----------|------|--------|----------------|
|               |                   |                    |                                                                                   | Work.        | Vol.     | P.   | Pl.    | Figs.          |
| Port.         | $\frac{4595}{1}$  | Type.              | <b>Orthis</b> Dalman— <i>Continued.</i><br><i>tenuistriata</i> ..... <i>Hall.</i> | Geol. N. Y.  | 4th D.   | 246  | ct.107 | 3              |
|               |                   |                    | <i>tioga</i> .....                                                                |              |          |      |        |                |
|               |                   |                    | <i>tulliensis</i> .....                                                           |              |          |      |        |                |
|               |                   |                    | <i>unguiculus</i> .....                                                           |              |          |      |        |                |
|               |                   |                    | <i>Vanuxemi</i> .....                                                             |              |          |      |        |                |
|               |                   |                    | sp.....                                                                           | Pal. N. Y.   | 4        | 39   | 5      | 5a, b          |
|               |                   |                    | <i>Orthisina</i> d'Orbigny.....                                                   |              |          |      |        |                |
|               |                   |                    | <i>arctostriata</i> .....                                                         |              |          |      |        |                |
| Chem.         | $\frac{4596}{1}$  | Fig'd.             | <b>Orthothetes</b> Fischer.<br><i>chemungensis</i> ( <i>Con.</i> ) <i>Hall.</i>   | Pal. N. Y.   | 4        | 67   | 10     | 2, 3           |
| "             | "                 | "                  | " " " "                                                                           | " "          | 4        | 67   | 10     | 4, 5           |
| "             | $\frac{4596}{2}$  | "                  | " " " "                                                                           | Geol. N. Y.  | 4th D.   | 266  | ct.120 | 2, v. v.       |
| "             | $\frac{4596}{3}$  | "                  | " " " "                                                                           | " "          | 4th D.   | 266  | ct.120 | 4, d. v.       |
| "             | $\frac{4596}{4}$  | "                  | " " " "                                                                           | Pal. N. Y.   | 4        | 67   | 10     | 6, 6a          |
| "             | $\frac{4596}{4}$  | "                  | " " " "                                                                           | " "          | 4        | 67   | 10     | 11-17          |
|               |                   |                    | " " " "<br><i>H. &amp; C.</i>                                                     | St. G. N. Y. | 2        | .... | 40     | 9, card.       |
|               |                   |                    | " " " "<br><i>H. &amp; C.</i>                                                     | " "          | 11       | .... | 16     | 9, "           |
| "             | $\frac{4597}{1}$  | Type.              | " <i>var. arctostriatus</i> <i>H.</i>                                             | Pal. N. Y.   | 8, pt. 1 | 255  | 10     | 9, "           |
| "             | $\frac{4597}{2}$  | "                  | " " " "                                                                           | Geol. N. Y.  | 4th D.   | 266  | ct.120 | 3              |
| "             | $\frac{4597}{2}$  | "                  | " " " "                                                                           | Pal. N. Y.   | 4        | 67   | 10     | 7              |
|               |                   |                    | " " " "                                                                           | " "          | 4        | 71   | 9      | 3-5, 8, 9      |
| Ham.          | $\frac{4597}{3}$  | "                  | " " " "                                                                           | " "          | 4        | 71   | 9      | 12, v. v. X 2  |
|               |                   |                    | " " " "<br><i>H. &amp; C.</i>                                                     | St. G. N. Y. | 2        | .... | 40     | 8, "           |
| U. H.         | $\frac{2816a}{3}$ | Fig'd.             | " " <i>pandora</i> ( <i>Bill.</i> ) <i>H.</i>                                     | Pal. N. Y.   | 8, pt. 1 | .... | 10     | 8, "           |
| "             | $\frac{2816a}{4}$ | "                  | " " " "                                                                           | " "          | 4        | 68   | 9      | 24, int. d. v. |
|               |                   |                    | " " " "                                                                           | " "          | 4        | 68   | 9      | 25, int. v. v. |
|               |                   |                    | " " " "<br><i>H. &amp; C.</i>                                                     | St. G. N. Y. | 2        | .... | 40     | 6, "           |
| "             | $\frac{2816b}{3}$ | Type.              | " " <i>perversus</i> <i>Hall.</i>                                                 | Pal. N. Y.   | 8, pt. 1 | 255  | 10     | 6, "           |
|               |                   |                    | " " " "                                                                           | N. Y. S. M.  | 10       | 137  | ....   | ....           |
| "             | $\frac{2816b}{5}$ | "                  | " " " "                                                                           | Pal. N. Y.   | 4        | 72   | 9      | 15, ext. v. v. |
|               |                   |                    | " " " "                                                                           | " "          | 4        | 72   | 9      | 26, ext. d. v. |
| Ham.          | $\frac{4598}{1}$  | Gen. and Sp. Type. | <b>Parazyga</b> Hall & Clarke.<br><i>hirsuta</i> ..... <i>Hall.</i>               | N. Y. S. M.  | 10       | 168  | ....   | ....           |
|               |                   |                    | " " " "                                                                           | " "          | 14       | 101  | ....   | ....           |
| "             | $\frac{4598}{2}$  | "                  | " " " "                                                                           | Pal. N. Y.   | 4        | 274  | 45     | 17, 18         |
| "             | $\frac{4598}{3}$  | "                  | " " " "                                                                           | " "          | 4        | 274  | 45     | 16, d. v.      |
|               |                   |                    | " " " "<br><i>H. &amp; C.</i>                                                     | " "          | 4        | 274  | 45     | 19, 20, 30-32  |
|               |                   |                    | " " " "<br><i>H. &amp; C.</i>                                                     | St. G. N. Y. | 13       | 801  | 38     | 14, 16         |
| "             | $\frac{4598}{4}$  | "                  | " " " "<br><i>H. &amp; C.</i>                                                     | Pal. N. Y.   | 8, pt. 2 | 128  | 39     | 34, 39         |
|               |                   |                    | " " " "<br><i>H. &amp; C.</i>                                                     | " "          | 4        | 274  | 45     | 28, 29         |
|               |                   |                    | " " " "<br><i>H. &amp; C.</i>                                                     | St. G. N. Y. | 13       | 801  | 38     | 15, int. d. v. |
|               |                   |                    | " " " "                                                                           | Pal. N. Y.   | 8, pt. 2 | 128  | 49     | 35, 37         |
| U. H.         | $\frac{3072}{1}$  | Fig'd.             | <b>Pentagonia</b> Cozzens.<br><i>unisulcata</i> ( <i>Con.</i> )... <i>Hall.</i>   | " "          | 4        | 309  | 50     | 18-20, 22, 23  |
| "             | $\frac{3072}{3}$  | "                  | " " " "                                                                           | " "          | 4        | 309  | 50     | 25-29          |
|               |                   |                    | " " " "<br><i>H. &amp; C.</i>                                                     | St. G. N. Y. | 13       | .... | 34     | 15-17          |
|               |                   |                    | " " " "<br><i>H. &amp; C.</i>                                                     | Pal. N. Y.   | 8, pt. 2 | .... | 42     | 22-24          |
| Ham.          | $\frac{3072}{4}$  | "                  | " " " "<br><i>Hall.</i>                                                           | " "          | 4        | 309  | 50     | 30-32          |



| LOCALITY.              | REMARKS.                                                                                                                                                                                                                                                                                                                     |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lake Keuka, N. Y.      | Not an <i>Orthis</i> , but it is uncertain what it is. Cast of valve from 6 miles south of Branchport.                                                                                                                                                                                                                       |
| .....                  | See <i>Schizophoria tioga</i> .                                                                                                                                                                                                                                                                                              |
| .....                  | " " <i>tulliensis</i> .                                                                                                                                                                                                                                                                                                      |
| .....                  | " <i>Ambocælia umbonata</i> , var. <i>gregaria</i> .                                                                                                                                                                                                                                                                         |
| .....                  | " <i>Rhipidomella Vanuxemi</i> .                                                                                                                                                                                                                                                                                             |
| .....                  | " " "                                                                                                                                                                                                                                                                                                                        |
| .....                  | Synonym of <i>Clitambonites</i> .                                                                                                                                                                                                                                                                                            |
| .....                  | See <i>Orthothes chemungensis</i> , var. <i>arctostriatus</i> .                                                                                                                                                                                                                                                              |
| Leon, N. Y.            | As <i>Streptorhynchus chemungense</i> . Two imprints in block with original of fig. 4, same plate.                                                                                                                                                                                                                           |
| " "                    | As <i>Streptorhynchus chemungense</i> . Imprints of the exterior and interior of a dorsal valve.                                                                                                                                                                                                                             |
| Naples, N. Y.          | As type of <i>Strophomena bifurcata</i> Hall. Imprint in block with others. From "Woodford's quarry."                                                                                                                                                                                                                        |
| .....                  | As type of <i>Strophomena pectinacea</i> Hall.                                                                                                                                                                                                                                                                               |
| Rockville, N. Y.       | " <i>Streptorhynchus chemungense</i> . Internal cast of dorsal valve retaining some shell. Allegany county.                                                                                                                                                                                                                  |
| .....                  | As <i>Streptorhynchus chemungense</i> .                                                                                                                                                                                                                                                                                      |
| .....                  | " " "                                                                                                                                                                                                                                                                                                                        |
| Near Tioga, Pa.        | Four individuals.                                                                                                                                                                                                                                                                                                            |
| .....                  | As <i>Strophomena arctostriata</i> .                                                                                                                                                                                                                                                                                         |
| Hobbierville, N. Y.    | " <i>Streptorhynchus chemungense</i> . Exfoliated ventral valve, imb.                                                                                                                                                                                                                                                        |
| Pavilion, N. Y.        | " " " var. <i>arctostriatum</i> . Two dorsal valves and a flattened individual.                                                                                                                                                                                                                                              |
| .....                  | As <i>Streptorhynchus chemungense</i> , var. <i>arctostriatum</i> .                                                                                                                                                                                                                                                          |
| .....                  | " " " " "                                                                                                                                                                                                                                                                                                                    |
| Near Apulia, N. Y.     | Internal cast imbedded with many others.                                                                                                                                                                                                                                                                                     |
| Williamsville, N. Y.   | As <i>Streptorhynchus chemungense</i> , var. <i>pandora</i> . Int. cast dors. valve.                                                                                                                                                                                                                                         |
| .....                  | " " " " "                                                                                                                                                                                                                                                                                                                    |
| .....                  | " " " " "                                                                                                                                                                                                                                                                                                                    |
| The Helderbergs, N. Y. | Internal cast of ventral valve.                                                                                                                                                                                                                                                                                              |
| .....                  | As <i>Orthis perversa</i> .                                                                                                                                                                                                                                                                                                  |
| Williamsville, N. Y.   | " <i>Streptorhynchus chemungense</i> , var. <i>perversum</i> . Ventr. valve, imb.                                                                                                                                                                                                                                            |
| Clarence, N. Y.        | " " " " " Dors. valve, imb.                                                                                                                                                                                                                                                                                                  |
| .....                  | " <i>Atrypa hirsuta</i> . Reference applies to all New York specimens.                                                                                                                                                                                                                                                       |
| .....                  | " <i>Trematospira hirsuta</i> .                                                                                                                                                                                                                                                                                              |
| York, N. Y.            | " " " Two entire individuals.                                                                                                                                                                                                                                                                                                |
| Louisville, Ky.        | " " " Entire individual.                                                                                                                                                                                                                                                                                                     |
| Darien, N. Y.          | " " " Two small indivs., a ventr. valve showing internal characters and an indiv. with shell cut away to show spires.                                                                                                                                                                                                        |
| .....                  | As <i>Trematospira hirsuta</i> .                                                                                                                                                                                                                                                                                             |
| Hamilton, N. Y.        | A detached dorsal valve.                                                                                                                                                                                                                                                                                                     |
| Schoharie, N. Y.       | As <i>Meristella</i> ( <i>Pentagonia</i> ) <i>unisulcata</i> . Two exfoliated individuals.                                                                                                                                                                                                                                   |
| .....                  | " " " "                                                                                                                                                                                                                                                                                                                      |
| Western New York.      | A large, exfoliated individual.                                                                                                                                                                                                                                                                                              |
| Falls of Ohio River.   | As <i>Meristella</i> ( <i>Pentagonia</i> ) <i>unisulcata</i> . Individual, nearly entire. In the 14th Rept. N. Y. S. M., p. 101, this species (the name of which was erroneously given as <i>uniangulata</i> ) was made the type of the proposed subgen., <i>Goniocælia</i> , wh. proved to be a syn. of <i>Pentagonia</i> . |

Class BRACHIOPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.       | Type or<br>Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.             | REFERENCE.   |          |      |      |                       |
|------------------|-------------------|------------------------|----------------------------------------|--------------|----------|------|------|-----------------------|
|                  |                   |                        |                                        | Work.        | Vol      | P.   | Pl.  | Figs.                 |
|                  |                   |                        | <b>Pentamerella</b> Hall.              |              |          |      |      |                       |
| Scho.            | $\frac{2837}{2a}$ | Fig'd Sp.<br>and G. T. | arata ( <i>Con.</i> ) . . . . . Hall.  | Pal. N. Y.   | 4        | 375  | 58   | I-4                   |
| "                | $\frac{2837}{2}$  | "                      | " " " "                                | " "          | 4        | 375  | 58   | 9, 11, 12             |
| U. H.            | $\frac{2837}{3}$  | "                      | " " " "                                | " "          | 4        | 375  | 58   | 13-16                 |
| "                | $\frac{2837}{4}$  | "                      | " " " "                                | " "          | 4        | 375  | 58   | 17, 18                |
|                  |                   |                        | H. & C.                                | St. G. N. Y. | 13       | .... | 48   | 9, 10                 |
|                  |                   |                        | "                                      | Pal. N. Y.   | 8, pt. 2 | 245  | 71   | 28, 29                |
| "                | $\frac{2837}{8}$  | "                      | " " . . . . . Hall.                    | " "          | 4        | 375  | 58   | 19, <i>d. v.</i>      |
| "                | $\frac{2837}{8a}$ | "                      | " " . . . . . "                        | " "          | 4        | 375  | 58   | 20, 21                |
| Ham.             | $\frac{4599}{1}$  | Type.                  | dubia . . . . . Hall.                  | N. Y. S. M.  | 13       | 90   | .... | ....                  |
|                  |                   |                        | "                                      | Pal. N. Y.   | 4        | 379  | 58   | 38-43                 |
|                  |                   |                        | H. & C.                                | " "          | 8, pt. 2 | 245  | 71   | 32, 33                |
| Ham.?            | $\frac{4600}{1}$  | "                      | micula . . . . . Hall.                 | " "          | 4        | 378  | 58   | 26, 27                |
| U. H.            | $\frac{4198}{1}$  | "                      | obsolescens . . . . . Hall.            | " "          | 4        | 379  | 58   | 24, 25                |
|                  |                   |                        | papilionensis . . . . .                | ....         | ....     | .... | .... | ....                  |
| Ham.             | $\frac{4601}{1}$  | "                      | pavilionensis . . . . . Hall.          | N. Y. S. M.  | 13       | 86   | .... | ....                  |
|                  |                   |                        | "                                      | Pal. N. Y.   | 4        | 377  | 58   | 29, 31-34, 37         |
|                  |                   |                        | <b>Pentamerus</b> Sowerby.             |              |          |      |      |                       |
|                  |                   |                        | occidentalis . . . . .                 | ....         | ....     | .... | .... | ....                  |
|                  |                   |                        | papilionensis . . . . .                | ....         | ....     | .... | .... | ....                  |
|                  |                   |                        | <b>Pholidops</b> Hall.                 |              |          |      |      |                       |
| Orisk.           | $\frac{2658}{1}$  | Type.                  | arenaria . . . . . Hall.               | Pal. N. Y.   | 4        | 413  | 3    | 3                     |
|                  |                   |                        | H. & C.                                | " "          | 8, pt. I | .... | 41   | 24                    |
| Scho.            | $\frac{2812}{2}$  | "                      | areolata . . . . . Hall.               | " "          | 4        | 31   | 3    | 4                     |
|                  |                   |                        | H. & C.                                | St. G. N. Y. | 11       | .... | 7    | 20                    |
| "                | $\frac{2812}{1}$  | "                      | " . . . . . Hall.                      | Pal. N. Y.   | 8, pt. I | .... | 41   | 26                    |
|                  |                   |                        | H. & C.                                | " "          | 4        | 31   | 3    | 5                     |
|                  |                   |                        | "                                      | St. G. N. Y. | 11       | .... | 7    | 21                    |
|                  |                   |                        | "                                      | Pal. N. Y.   | 8, pt. I | .... | 41   | 25                    |
| Ham.             | $\frac{4602}{1}$  | "                      | hamiltoniæ . . . . . Hall.             | N. Y. S. M.  | 13       | 92   |      |                       |
|                  |                   |                        | "                                      | Pal. N. Y.   | 4        | 32   | 3    | 7, 8                  |
| Orisk.           | $\frac{2729}{1}$  | "                      | terminalis . . . . . Hall.             | " "          | 3        | 490  | 103B | 8a-d                  |
|                  |                   |                        | <b>Pholidostrophia</b> H. & C. . . . . | ....         | ....     | .... | .... | ....                  |
| Ham.             | $\frac{4603}{1}$  | Gen. and<br>Sp. Type   | nacrea . . . . . Hall.                 | N. Y. S. M.  | 10       | 144  | .... | ....                  |
|                  |                   |                        | "                                      | Pal. N. Y.   | 4        | 104  | 18   | 1b-e                  |
|                  |                   |                        | "                                      | St. G. N. Y. | 2        | .... | 46   | 20-22                 |
|                  |                   |                        | H. & C.                                | " "          | 11       | 281  | 14   | 11, <i>ext. v. v.</i> |
|                  |                   |                        | "                                      | Pal. N. Y.   | 8, pt. I | 287  | 15   | 20-22                 |
| "                | $\frac{4603}{2}$  | "                      | " . . . . . Hall.                      | " "          | 4        | 104  | 18   | 1g, <i>int.</i>       |
|                  |                   |                        | "                                      | St. G. N. Y. | 2        | .... | 46   | 24, "                 |
|                  |                   |                        | H. & C.                                | " "          | 11       | 281  | 14   | 12, "                 |
|                  |                   |                        | "                                      | Pal. N. Y.   | 8, pt. I | 287  | 15   | 24, "                 |
| "                | $\frac{4603}{3}$  | "                      | " . . . . . Hall.                      | " "          | 4        | 104  | 18   | 1h, "                 |
|                  |                   |                        | "                                      | St. G. N. Y. | 2        | .... | 46   | 23, "                 |
|                  |                   |                        | H. & C.                                | " "          | 11       | 281  | 14   | 13, "                 |
|                  |                   |                        | "                                      | Pal. N. Y.   | 8, pt. I | 287  | 15   | 23, "                 |
|                  |                   |                        | <b>Plethorhynchus</b> H. & C. . . . .  | ....         | ....     | .... | .... | ....                  |



| LOCALITY.               | REMARKS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Schoharie, N. Y.        | Two small individuals.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Clarksville, N. Y.      | Internal cast of dorsal valve and an old exfoliated ventral valve.                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Schoharie Co., N. Y.    | An entire individual.                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Albany Co., N. Y.       | Two somewhat imperfect opposite valves which have been dissolved out of the limestone. Silicified.                                                                                                                                                                                                                                                                                                                                                                                              |
| Falls of Ohio River.    | Entire internal siliceous cast.                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Waterloo, Iowa.         | Small individual.                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| .....                   | As <i>Spirifer dubius</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Near Iowa City, Iowa.   | Two individuals, the larger one somewhat exfoliated.                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| “ “                     | A dorsal valve.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Waterloo, Iowa.         | A ventral valve.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| .....                   | See <i>Pentamerella pavilionensis</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| .....                   | As <i>Pentamerus papilionensis</i> . This spelling of the specific name was due to typographical error.                                                                                                                                                                                                                                                                                                                                                                                         |
| Canandaigua L., N. Y.   | Two exfoliated individuals and a ventral valve.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| .....                   | See <i>Gypidula comis</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| .....                   | “ <i>Pentamerella pavilionensis</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Knox, N. Y.             | Internal imprint of dorsal (?) valve. Figures are enlargements to three diameters. Six other casts are in the series.                                                                                                                                                                                                                                                                                                                                                                           |
| “ “                     | Internal imprint of dorsal (?) valve.                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Near Clarksville, N. Y. | “ “ ventral (?) “                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Darien, N. Y.           | A detached dorsal (?) valve and the imprint of another. Figures are enlargements to eight diameters.                                                                                                                                                                                                                                                                                                                                                                                            |
| Cumberland, Md.         | An individual (?) and two detached valves.                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| .....                   | Defined as a subgenus of <i>Strophodonta</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| .....                   | As <i>Strophomena (Strophodonta) nacrea</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| .....                   | “ <i>Strophodonta nacrea</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| .....                   | “ “ “                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Darien, N. Y.           | Two entire individuals.                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| .....                   | As <i>Strophodonta nacrea</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| .....                   | “ “ “                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Canandaigua L., N. Y.   | Imbedded ventral valve. Hinge area has been broken.                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| .....                   | As <i>Strophodonta nacrea</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| .....                   | “ “ “                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Genesee Co., N. Y.      | An entire dorsal valve.                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| .....                   | Proposed (Pal. N. Y., vol. 8, pt. 2, p. 191) as a subgenus of <i>Camarotachia</i> . <i>Plethorhynchus Barrandii</i> and <i>P. pleiopleura</i> have been referred to this genus by Hall and Clarke, <i>loc. cit.</i> , but the remainder of the following species are here referred to this genus on account of their relationship to <i>Plethorhynchus speciosum</i> . There does not seem to be any sufficient reason, however, for separating any of these species from <i>Rhynchonella</i> . |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                        | REFERENCE.   |          |       |       |                       |
|---------------|------------------|-------------------|-------------------------------------------------------------------|--------------|----------|-------|-------|-----------------------|
|               |                  |                   |                                                                   | Work.        | Vol.     | P.    | Pl.   | Figs.                 |
| Orisk.        | <u>2675</u><br>1 | Type.             | <b>Plethorhynchus</b> H. & C.— <i>Con.</i><br>Barrandii.....Hall. | N. Y. S. M.  | 10       | 82    | ..... | .....                 |
|               |                  |                   | “ “ “ “ “ “                                                       | Pal. N. Y.   | 3        | 442   | 103   | 4, <i>int. v. v.</i>  |
|               | <u>2681</u><br>1 | “                 | Fitchanum.....Hall.                                               | N. Y. S. M.  | 10       | 85    | ..... | .....                 |
|               |                  |                   | “ “ “ “ “ “                                                       | Pal. N. Y.   | 3        | 441   | 103   | 1a, b                 |
|               | <u>2677</u><br>2 | “                 | multistriatum.....Hall.                                           | N. Y. S. M.  | 10       | 85    | ..... | .....                 |
|               |                  |                   | “ “ “ “ “ “                                                       | Pal. N. Y.   | 3        | 440   | 102   | 3, <i>ext. v. v.</i>  |
|               |                  |                   | “ “ “ “ “ “                                                       | “ “ “ “ “ “  | 3        | 440   | 106   | 3, “                  |
|               | <u>2680</u><br>1 | “                 | oblatum.....Hall.                                                 | N. Y. S. M.  | 10       | 86    | ..... | .....                 |
|               |                  |                   | “ “ “ “ “ “                                                       | Pal. N. Y.   | 3        | 439   | 102   | 1-2d                  |
|               | <u>2679</u><br>1 | Fig'd.            | pleiopleura ( <i>Con.</i> )...Hall.                               | “ “ “ “ “ “  | 3        | 440   | 102   | 3a-4c                 |
|               | <u>2676</u><br>1 | Type.             | principale.....Hall.                                              | N. Y. S. M.  | 10       | 84    | ..... | .....                 |
|               |                  |                   | “ “ “ “ “ “                                                       | Pal. N. Y.   | 3        | 443   | 106   | 4, <i>ext. v. v.</i>  |
|               | <u>2735</u><br>1 | “                 | Ramsayi.....Hall.                                                 | “ “ “ “ “ “  | 3        | 446   | 101A  | 7, 8                  |
|               | <u>2678</u><br>1 | “                 | septatum.....Hall.                                                | “ “ “ “ “ “  | 3        | 443   | 103   | 2, <i>int. d. v.</i>  |
|               | <u>2734</u><br>1 | Gen and Sp. Type. | speciosum.....Hall.                                               | N. Y. S. M.  | 10       | 81    | ..... | .....                 |
| “             |                  |                   | “ “ “ “ “ “                                                       | Pal. N. Y.   | 3        | 444   | 103A  | 2a-d                  |
|               |                  |                   | H. & C. “ “ “ “ “ “                                               | St. G. N. Y. | 13       | 827   | 43    | 13, 15                |
|               |                  |                   | “ “ “ “ “ “                                                       | Pal. N. Y.   | 8, pt. 2 | 191   | 58    | 29-31                 |
|               | “                | “                 | “ “ “ “ “ “                                                       | “ “ “ “ “ “  | 3        | 444   | 103A  | 4a-c                  |
|               | “                | “                 | “ “ “ “ “ “                                                       | “ “ “ “ “ “  | 3        | 444   | 103A  | 6a, b                 |
|               |                  |                   | H. & C. “ “ “ “ “ “                                               | St. G. N. Y. | 13       | 827   | 43    | 11, 14                |
|               |                  |                   | “ “ “ “ “ “                                                       | Pal. N. Y.   | 8, pt. 2 | 191   | 58    | 32, 33                |
|               |                  |                   | <b>Productella</b> Hall.                                          |              |          |       |       |                       |
|               | <u>4604</u><br>1 | Type.             | arctirostrata.....Hall.                                           | N. Y. S. M.  | 10       | 177   | ..... | .....                 |
|               |                  |                   | “ “ “ “ “ “                                                       | Pal. N. Y.   | 4        | 182   | 26    | 16, 17, 19-21         |
|               | <u>4604</u><br>2 | “                 | “ “ “ “ “ “                                                       | “ “ “ “ “ “  | 4        | 182   | 26    | 22, 23                |
|               | <u>4605</u><br>1 | “                 | Boydi.....Hall.                                                   | N. Y. S. M.  | 10       | 179   | ...   | 1, 3                  |
|               |                  |                   | “ “ “ “ “ “                                                       | Pal. N. Y.   | 4        | 169   | 24    | 10-16                 |
|               |                  |                   | “ “ “ “ “ “                                                       | St. G. N. Y. | 2        | ....  | 48    | 24, <i>v. v.</i>      |
|               |                  |                   | H. & C. “ “ “ “ “ “                                               | Pal. N. Y.   | 8, pt. 1 | ....  | 17    | 24, “                 |
|               | <u>4606</u><br>1 | “                 | exanthemata.....Hall.                                             | N. Y. S. M.  | 10       | 174   | ..... | .....                 |
| Ham.          |                  |                   | “ “ “ “ “ “                                                       | Pal. N. Y.   | 4        | 163   | 23    | 46, <i>int.</i>       |
|               |                  |                   | “ “ “ “ “ “                                                       | St. G. N. Y. | 2        | ....  | 48    | 17, “                 |
|               |                  |                   | H. & C. “ “ “ “ “ “                                               | Pal. N. Y.   | 8, pt. 1 | ....  | 17    | 17, “                 |
|               | <u>4606</u><br>2 | “                 | “ “ “ “ “ “                                                       | “ “ “ “ “ “  | 4        | 163   | 25    | 12, <i>d. v.</i>      |
|               | <u>4606</u><br>3 | “                 | “ “ “ “ “ “                                                       | “ “ “ “ “ “  | 4        | 163   | 25    | 13, “                 |
|               | <u>4607</u><br>1 | “                 | hirsuta.....Hall.                                                 | N. Y. S. M.  | 10       | 175   | ..... | 3                     |
|               | <u>4607</u><br>2 | “                 | “ “ “ “ “ “                                                       | “ “ “ “ “ “  | 10       | 175   | ..... | .....                 |
|               |                  |                   | “ “ “ “ “ “                                                       | Pal. N. Y.   | 4        | 166   | 24    | 17, 24, 25            |
|               | “                | “                 | “ “ “ “ “ “                                                       | “ “ “ “ “ “  | 4        | 166   | 24    | 18, 19                |
|               | “                | “                 | “ “ “ “ “ “                                                       | “ “ “ “ “ “  | 4        | 166   | 24    | 20, 26                |
|               | “                | “                 | “ “ “ “ “ “                                                       | “ “ “ “ “ “  | 4        | 166   | 24    | 21, <i>v. v.</i>      |
|               | <u>4607</u><br>3 | “                 | “ “ “ “ “ “                                                       | “ “ “ “ “ “  | 4        | 166   | 24    | 22, 23                |
|               |                  |                   | “ “ “ “ “ “                                                       | St. G. N. Y. | 2        | ....  | 48    | 28, <i>v. v.</i>      |
|               |                  |                   | H. & C. “ “ “ “ “ “                                               | Pal. N. Y.   | 8, pt. 1 | ....  | 17    | 28, “                 |
|               | <u>4607</u><br>2 | “                 | “ “ “ “ “ “                                                       | “ “ “ “ “ “  | 4        | 166   | 24    | 27, 28                |
| Chem.         | <u>4607</u><br>4 | “                 | “ “ “ “ “ “                                                       | “ “ “ “ “ “  | 4        | 166   | 24    | 29, <i>enl.</i>       |
|               |                  |                   | “ “ “ “ “ “                                                       | St. G. N. Y. | 2        | ....  | 48    | 45, “                 |
|               |                  |                   | H. & C. “ “ “ “ “ “                                               | Pal. N. Y.   | 8, pt. 1 | ....  | 17    | 45, “                 |
|               | <u>4608</u><br>1 | “                 | “ <i>var. rectispina</i> Hall.                                    | “ “ “ “ “ “  | 4        | 168   | 24    | 31, 32                |
|               | “                | “                 | “ “ “ “ “ “                                                       | “ “ “ “ “ “  | 4        | 168   | 24    | 33-36                 |
|               | “                | “                 | “ “ “ “ “ “                                                       | Pal. N. Y.   | 4        | 168   | 24    | 37, <i>int. d. v.</i> |
|               |                  |                   | “ “ “ “ “ “                                                       | St. G. N. Y. | 2        | ....  | 48    | 37, “                 |
|               |                  |                   | H. & C. “ “ “ “ “ “                                               | Pal. N. Y.   | 8, pt. 1 | ....  | 17    | 37, “                 |
|               |                  |                   | <i>hystriacula</i> .....                                          | .....        | .....    | ..... | ..... | .....                 |
|               |                  |                   | <i>lachrymosa</i> .....                                           | .....        | .....    | ..... | ..... | .....                 |
|               |                  |                   |                                                                   |              |          |       |       |                       |
|               |                  |                   |                                                                   |              |          |       |       |                       |
|               |                  |                   |                                                                   |              |          |       |       |                       |
|               |                  |                   |                                                                   |              |          |       |       |                       |
|               |                  |                   |                                                                   |              |          |       |       |                       |



| LOCALITY.             | REMARKS.                                                                                                                  |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------|
| .....                 | As <i>Rhynchonella Barrandii</i> .                                                                                        |
| .....                 | “ “ “ Internal cast of ventral valve.                                                                                     |
| .....                 | “ “ <i>Fitchana</i> .                                                                                                     |
| Schoharie, N. Y.      | “ “ “ A somewhat distorted cast.                                                                                          |
| .....                 | “ “ <i>multistriata</i> .                                                                                                 |
| Schoharie, N. Y.      | “ “ “ Somewhat exfol. ventral valve, imb.                                                                                 |
| Nr.Cooperstown, N. Y. | “ “ “ Exfoliated ventral valve, imbedded.                                                                                 |
| .....                 | “ “ <i>oblata</i> .                                                                                                       |
| Schoharie, N. Y.      | “ “ “ Three casts.                                                                                                        |
| “ “                   | “ “ <i>pleiopleura</i> . Two internal casts.                                                                              |
| .....                 | “ “ <i>principalis</i> .                                                                                                  |
| Auburn, N. Y.         | “ “ “ Ventral valve, imbedded.                                                                                            |
| Cumberland, Md.       | “ “ <i>Ramsayi</i> . An individ. and an int. cast, siliceous.                                                             |
| Knox, N. Y.           | “ “ <i>septata</i> . Internal cast of dorsal valve.                                                                       |
| .....                 | “ “ <i>speciosa</i> .                                                                                                     |
| .....                 | “ “ “                                                                                                                     |
| Cumberland, Md.       | Very large silicified individual, somewhat broken.                                                                        |
| “ “                   | As <i>Rhynchonella speciosa</i> .                                                                                         |
| .....                 | “ “ “                                                                                                                     |
| Cumberland, Md.       | Very large silicified dorsal valve.                                                                                       |
| .....                 | As <i>Productus arctirostratus</i> .                                                                                      |
| Near Cadiz, N. Y.     | External impr. dors. valve and internal impr. ventral valve, separate.                                                    |
| Jasper, N. Y.         | A somewhat exfoliated and distorted ventral valve, imbedded.                                                              |
| .....                 | As <i>Productus Boydi</i> .                                                                                               |
| Belmont, N. Y.        | Six specimens.                                                                                                            |
| .....                 | As <i>Productus exanthematus</i> .                                                                                        |
| Seneca Lake, N. Y.    | Large dorsal valve, imbedded.                                                                                             |
| Near Ithaca, N. Y.    | Exfoliated dorsal valve, imbedded.                                                                                        |
| Western New York.     | Cast of dorsal valve.                                                                                                     |
| Tioga Co., N. Y.      | As <i>Productus hirsutus</i> . Compressed specimen in shale.                                                              |
| .....                 | “ “ “                                                                                                                     |
| Belmont, N. Y.        | Two ventral valves in separate blocks.                                                                                    |
| “ “                   | Casts of two large ventral valves in the same block.                                                                      |
| “ “                   | Internal casts of opp. valves in same block. Each retains some shell.                                                     |
| “ “                   | Internal cast of ventral valve retaining small portion of shell.                                                          |
| Covington, Pa.        | Cast of ventral valve. Tioga county.                                                                                      |
| Belmont, N. Y.        | Internal cast of dorsal valve retaining cardinal process.                                                                 |
| Nr.Troupsburg, N.Y.   | Ventral valve, imbedded.                                                                                                  |
| Steuben Co., N. Y.    | Casts of two ventr. valves in same block. Fr. southern part of county.                                                    |
| “ “                   | Three specimens in separate blocks. “ “ “                                                                                 |
| “ “                   | Incomplete internal imprint of dorsal valve. Figure was made from gutta percha squeeze. From southern part of the county. |
| .....                 | See <i>Strophalosia hystricula</i> .                                                                                      |
| .....                 | “ <i>Productella lachrymosa</i> , var. <i>lima</i> .                                                                      |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.          | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                                                                                                                                                                                             | REFERENCE.                                                                    |                                                                               |                                                                               |                                                                               |                                                      |
|---------------|-------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------|------------------------------------------------------|
|               |                   |                   |                                                                                                                                                                                                                                                        | Work.                                                                         | Vol.                                                                          | P.                                                                            | Pl.                                                                           | Figs.                                                |
| Chem.         | $\frac{4609}{1}$  | Fig'd.            | <b>Productella</b> Hall— <i>Cont.</i><br>lachrymosa ( <i>Con.</i> ), <i>var.</i><br>lima ( <i>Con.</i> ) <i>H.</i><br><i>Hall.</i><br><i>H. &amp; C.</i>                                                                                               | Pal. N. Y.<br>St. G. N. Y.<br>Pal. N. Y.                                      | 4<br>2<br>8, pt. I                                                            | 172<br>.....<br>.....                                                         | 25<br>48<br>17                                                                | 25, <i>v. v.</i><br>23, "<br>23, "                   |
| "             | $\frac{4610}{1}$  | Type.             | " <i>var.</i> stigmata <i>Hall.</i>                                                                                                                                                                                                                    | " "                                                                           | 4                                                                             | 174                                                                           | 25                                                                            | 33                                                   |
| Ham.          | $\frac{3055}{3}$  | "                 | navicella ..... <i>Hall.</i>                                                                                                                                                                                                                           | N. Y. S. M.<br>Pal. N. Y.<br>St. G. N. Y.<br><i>H. &amp; C.</i>               | 10<br>4<br>2<br>8, pt. I                                                      | 172<br>156<br>.....<br>.....                                                  | .....<br>23<br>48<br>17                                                       | .....<br>9-11<br>8, 9<br>8, 9                        |
| U. H.         | $\frac{3055}{1}$  | "                 | " ..... <i>Hall.</i>                                                                                                                                                                                                                                   | " "                                                                           | 4                                                                             | 156                                                                           | 23                                                                            | 2, <i>ext.</i>                                       |
| Chem.         | $\frac{4611}{1}$  | "                 | onusta ..... <i>Hall.</i>                                                                                                                                                                                                                              | " "                                                                           | 4                                                                             | 184                                                                           | 26                                                                            | 34                                                   |
| "             | $\frac{4612}{1}$  | "                 | rarispina ..... <i>Hall.</i>                                                                                                                                                                                                                           | N. Y. S. M.<br>Pal. N. Y.                                                     | 10<br>4                                                                       | 178<br>170                                                                    | .....<br>24                                                                   | I<br>1-4, 6, 7                                       |
| "             | "                 | "                 | " ..... "                                                                                                                                                                                                                                              | " "                                                                           | 4                                                                             | 170                                                                           | 24                                                                            | 5, 8, 9                                              |
| "             | $\frac{4613}{1}$  | "                 | speciosa ..... <i>Hall.</i>                                                                                                                                                                                                                            | N. Y. S. M.<br>Pal. N. Y.<br>St. G. N. Y.<br><i>H. &amp; C.</i>               | 10<br>4<br>2<br>8, pt. I                                                      | 176<br>175<br>.....<br>.....                                                  | .....<br>25<br>48<br>17                                                       | .....<br>2, 3, 9-11<br>26<br>26                      |
| Ham.          | $\frac{4377a}{2}$ | "                 | spinulicosta ..... <i>Hall.</i>                                                                                                                                                                                                                        | N. Y. S. M.<br>Pal. N. Y.                                                     | 10<br>4                                                                       | 173<br>160                                                                    | .....<br>23                                                                   | .....<br>25-27                                       |
| Mar.          | $\frac{4377a}{1}$ | "                 | " ..... "                                                                                                                                                                                                                                              | " "<br>St. G. N. Y.<br><i>H. &amp; C.</i>                                     | 4<br>2<br>8, pt. I                                                            | 160<br>.....<br>.....                                                         | 23<br>48<br>17                                                                | 35, <i>ext.</i><br>4, "<br>4, "                      |
| Chem.         | $\frac{4614}{1}$  | "                 | striatula ..... <i>Hall.</i>                                                                                                                                                                                                                           | " "                                                                           | 4                                                                             | 177                                                                           | 25                                                                            | 14, 17, 18                                           |
| Ham.          | $\frac{3056}{2}$  | Fig'd.            | subaculeata ( <i>Murch.</i> ) <i>Hall.</i>                                                                                                                                                                                                             | " "<br>St. G. N. Y.<br><i>H. &amp; C.</i>                                     | 4<br>2<br>8, pt. I                                                            | 154<br>.....<br>328                                                           | 23<br>48<br>17                                                                | 4, <i>ext. v. v.</i><br>I, "<br>I, "                 |
| U. H.         | $\frac{3056}{1}$  | "                 | " " <i>Hall.</i>                                                                                                                                                                                                                                       | " "<br>St. G. N. Y.<br><i>H. &amp; C.</i>                                     | 4<br>2<br>8, pt. I                                                            | 154<br>.....<br>328                                                           | 23<br>48<br>17                                                                | 5, <i>int. d. v.</i><br>2, "<br>2, "                 |
| Ham.          | $\frac{4615}{1}$  | Type.             | subalata ..... <i>Hall.</i>                                                                                                                                                                                                                            | N. Y. S. M.<br>Geol. Ia.<br>Pal. N. Y.<br>St. G. N. Y.<br><i>H. &amp; C.</i>  | 10<br>1, pt. 2<br>4<br>2<br>8, pt. I                                          | 174<br>500<br>165<br>.....<br>.....                                           | .....<br>3<br>23<br>48<br>17                                                  | .....<br>10a-c<br>49, <i>v. v.</i><br>16, "<br>16, " |
| Ham.          | $\frac{4616}{1}$  | Type.             | <i>truncata</i> .....<br>tullia ..... <i>Hall.</i>                                                                                                                                                                                                     | .....<br>Pal. N. Y.                                                           | .....<br>4                                                                    | .....<br>164                                                                  | .....<br>23                                                                   | .....<br>41                                          |
|               |                   |                   | <b>Productus</b> Sowerby.<br><i>arctirostratus</i> .....<br><i>Boyd.</i> .....<br><i>dissimilis</i> ..... <i>Hall.</i>                                                                                                                                 | .....<br>.....<br>Geol. Ia.                                                   | .....<br>.....<br>1, pt. 2                                                    | .....<br>.....<br>497                                                         | .....<br>.....<br>3                                                           | .....<br>.....<br>7a-e                               |
|               |                   |                   | <i>exanthematus</i> .....<br><i>hirsutus</i> .....<br><i>navicella</i> .....<br><i>pustulosus</i> H. (non Phill.)<br><i>rarispina</i> .....<br><i>speciosus</i> .....<br><i>spinulicosta</i> .....<br><i>subalatus</i> .....<br><i>truncatus</i> ..... | .....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>..... | .....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>..... | .....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>..... | .....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>.....<br>..... |                                                      |
| Orisk.        | $\frac{2741}{1}$  | Type.             | <b>Rensselæria</b> Hall.<br>cumberlandiæ ..... <i>Hall.</i><br>"<br><br><i>johanni</i> .....                                                                                                                                                           | N. Y. S. M.<br>Pal. N. Y.<br>.....<br>.....<br>.....                          | 10<br>3<br>.....<br>.....<br>.....                                            | 101<br>464<br>.....<br>.....<br>.....                                         | .....<br>108<br>.....<br>.....<br>.....                                       | .....<br>1d-f<br>.....<br>.....<br>.....             |



| LOCALITY.                 | REMARKS.                                                                                                                            |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| .....                     | As <i>Productella lachrymosa</i> Con.                                                                                               |
| Chemung Narrows,<br>N. Y. | Slightly crushed cast of a ventral valve.                                                                                           |
| Nr. Salamanca, N. Y.      | External cast of dorsal valve.<br>As <i>Productus navicella</i> .                                                                   |
| .....                     |                                                                                                                                     |
| Moscow, N. Y.             | Ventral valve of elongate form. The original type.                                                                                  |
| Nr. Williamsville, N. Y.  | “ “ imbedded.                                                                                                                       |
| Nr. Salamanca, N. Y.      | Internal cast of dorsal valve retaining shell along hinge line.<br>As <i>Productus rarispinæ</i> .                                  |
| .....                     |                                                                                                                                     |
| Belmont, N. Y.            | Three casts of ventral valves retaining small portions of shell.                                                                    |
| “ “                       | An imperfect ventral and a dorsal valve, imbedded separately.                                                                       |
| .....                     | As <i>Productus speciosus</i> .                                                                                                     |
| .....                     |                                                                                                                                     |
| Chautauqua Co., N. Y.     | Two opposite valves, imbedded together. From 20 Mile creek.                                                                         |
| .....                     | As <i>Productus spinulicostæ</i> .                                                                                                  |
| 18 Mile Creek, N. Y.      | Two ventral valves, imbedded separately. From the lake shore.                                                                       |
| .....                     |                                                                                                                                     |
| LeRoy, N. Y.              | Ventral valve, imbedded.                                                                                                            |
| E. Randolph, N. Y.        | A dorsal and a ventral valve imbedded together.                                                                                     |
| .....                     | Specific reference queried.                                                                                                         |
| .....                     | “ “ “                                                                                                                               |
| Falls of Ohio River.      | In chert.                                                                                                                           |
| .....                     | Specific reference queried.                                                                                                         |
| .....                     | “ “ “                                                                                                                               |
| E. Victor, N. Y.          | Dorsal valve, imbedded.                                                                                                             |
| .....                     | As <i>Productus subalatus</i> .                                                                                                     |
| .....                     | “ “ “                                                                                                                               |
| .....                     |                                                                                                                                     |
| Rock Island, Ill.         | Three ventral valves.                                                                                                               |
| .....                     | See <i>Strophalosia truncata</i> .                                                                                                  |
| Onondaga Co., N. Y.       | External imprint of dorsal valve retaining cardinal process.                                                                        |
| .....                     |                                                                                                                                     |
| .....                     | See <i>Productella arctirostrata</i> .                                                                                              |
| .....                     | “ “ <i>Boydii</i> .                                                                                                                 |
| Rockford, Iowa.           | Entire individual. Possibly to be referred to <i>Marginifera</i> , according to Hall and Clarke, Pal. N. Y., vol. 8, pt. 1, p. 332. |
| .....                     | See <i>Productella exanthemata</i> .                                                                                                |
| .....                     | “ “ <i>hirsuta</i> .                                                                                                                |
| .....                     | “ “ <i>navicella</i> .                                                                                                              |
| .....                     | “ <i>Strophalosia truncata</i> .                                                                                                    |
| .....                     | “ <i>Productella rarispina</i> .                                                                                                    |
| .....                     | “ “ <i>speciosa</i> .                                                                                                               |
| .....                     | “ “ <i>spinulicosta</i> .                                                                                                           |
| .....                     | “ “ <i>subalata</i> .                                                                                                               |
| .....                     | “ <i>Strophalosia truncata</i> .                                                                                                    |
| .....                     |                                                                                                                                     |
| .....                     | As <i>Meganteris cumberlandiæ</i> .                                                                                                 |
| Cumberland, Md.           | A somewhat imperfect, silicified individual. The original of the figures 1a-c was lost by the lithographer.                         |
| .....                     | See <i>Newberria johannis</i> .                                                                                                     |

Class BRACHIOPODA—Continued.

| Geol. Subdiv.      | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.     | REFERENCE.         |              |                         |             |              |          |             |  |
|--------------------|------------------|--------------------|--------------------------------|--------------------|--------------|-------------------------|-------------|--------------|----------|-------------|--|
|                    |                  |                    |                                | Work.              | Vol.         | P.                      | Pl.         | Figs.        |          |             |  |
| Orisk.             | <u>2742</u><br>1 | Type.              | <b>Rensselæria</b> Hall.—Cont. |                    |              |                         |             |              |          |             |  |
|                    |                  |                    | marylandica . . . . .Hall.     | Pal. N. Y.         | 3            | 461                     | 108         | 3a-e         |          |             |  |
|                    |                  |                    | H. & C.                        | " "                | 8, pt. 2     | 256                     | 76          | 11, 15       |          |             |  |
|                    |                  |                    | "                              | "                  | "            | 3                       | 461         | 108          | 3g, h    |             |  |
|                    |                  |                    | H. & C.                        | " "                | 8, pt. 2     | 256                     | 76          | 12, int.v.v. |          |             |  |
|                    |                  |                    | "                              | "                  | "            | 3                       | 461         | 108          | 3i, k    |             |  |
|                    |                  |                    | H. & C.                        | St. G. N. Y.       | 13           | ....                    | 50          | 10, int.d.v. |          |             |  |
|                    |                  |                    | "                              | Pal. N. Y.         | 8, pt. 2     | 256                     | 76          | 17, "        |          |             |  |
|                    |                  |                    | "                              | "                  | "            | 3                       | 461         | 108          | 3l, m    |             |  |
|                    |                  |                    | H. & C.                        | St. G. N. Y.       | 13           | ....                    | 50          | 8, 9         |          |             |  |
| "                  | "                | "                  | Pal. N. Y.                     | 8, pt. 2           | 256          | 76                      | 13, 14      |              |          |             |  |
| Orisk.             | <u>2684</u><br>2 | Fig'd Sp. and G.T. | ovalis . . . . .               |                    |              |                         |             |              |          |             |  |
|                    |                  |                    | ovoides (Eaton) . . . .Hall.   | N. Y. S. M.        | 10           | 102                     | ....        |              |          |             |  |
|                    |                  |                    | "                              | Pal. N. Y.         | 3            | 456                     | 104         | 1a-c, 2a, b  |          |             |  |
|                    |                  |                    | "                              | "                  | 3            | 456                     | 104         | 1d, 3a       |          |             |  |
|                    |                  |                    | "                              | "                  | 3            | 456                     | 104         | 3b, c        |          |             |  |
|                    |                  |                    | "                              | "                  | 3            | 456                     | 104         | 3d, card.    |          |             |  |
|                    |                  |                    | "                              | "                  | 3            | 456                     | 105         | 4, d. v.     |          |             |  |
|                    |                  |                    | "                              | "                  | 3            | 456                     | 104         | 4            |          |             |  |
|                    |                  |                    | "                              | "                  | 3            | 456                     | 105         | 1, 3         |          |             |  |
|                    |                  |                    | H. & C.                        | St. G. N. Y.       | 13           | 850                     | 50          | 13, ext.d.v. |          |             |  |
| "                  | "                | Pal. N. Y.         | 8, pt. 2                       | 257                | 75           | 7, "                    |             |              |          |             |  |
| "                  | <u>2684</u><br>2 | "                  | "                              | "                  | 3            | 456                     | 105         | 5, int. v.v. |          |             |  |
| "                  | <u>2684</u><br>1 | "                  | "                              | "                  | 3            | 456                     | 105         | 6, int. d.v. |          |             |  |
| Suessana . . . . . |                  |                    |                                |                    |              |                         |             |              |          |             |  |
| U. H.              | <u>3036</u><br>1 | Type.              | <b>Rhipidomella</b> Œhlert.    |                    |              |                         |             |              |          |             |  |
|                    |                  |                    | cleobis . . . . .Hall.         | N. Y. S. M.        | 16           | 35                      | ....        |              |          |             |  |
|                    |                  |                    | "                              | Pal. N. Y.         | 4            | 41                      | 5           | 10           |          |             |  |
|                    |                  |                    | Ham.                           | <u>4618</u><br>1   | "            | cyclas . . . . .Hall.   | N. Y. S. M. | 13           | 78       | ....        |  |
|                    |                  |                    | "                              | "                  | Pal. N. Y.   | 4                       | 52          | 7            | 2, 3     |             |  |
|                    |                  |                    | U. H.                          | <u>3035</u><br>1   | "            | eryna . . . . .Hall.    | N. Y. S. M. | 16           | 35       | ....        |  |
|                    |                  |                    | "                              | "                  | "            | "                       | 10          | 109          | ....     |             |  |
|                    |                  |                    | "                              | "                  | Pal. N. Y.   | 4                       | 42          | 5            | 11a, b   |             |  |
|                    |                  |                    | Ham.                           | <u>4619</u><br>1   | "            | leucosia . . . . .Hall. | N. Y. S. M. | 13           | 80       | ....        |  |
|                    |                  |                    | "                              | "                  | "            | Pal. N. Y.              | 4           | 48           | 7        | 4a, b, g, h |  |
| "                  | "                | "                  | "                              | St. G. N. Y.       | 2            | ....                    | 36          | 16, int.v.v. |          |             |  |
| "                  | <u>4619</u><br>2 | "                  | "                              | H. & C. Pal. N. Y. | 8, pt. 1     | 225                     | 6           | 16, "        |          |             |  |
| Chem.              | <u>4619</u><br>3 | Fig'd.             | " ? . . . . .Hall.             | " "                | 4            | 48                      | 7           | 4i, "        |          |             |  |
| "                  | <u>4619</u><br>3 | "                  | " " . . . . .                  | " "                | 4            | 63                      | 8           | 9, 10        |          |             |  |
| Ham.               | <u>4619</u><br>2 | "                  | " " . . . . .                  | " "                | 4            | ....                    | 6           | 2m, int.d.v. |          |             |  |
| Orisk.             | <u>2659</u><br>1 | Type.              | musculosa . . . . .Hall.       | N. Y. S. M.        | 10           | 46                      | ....        |              |          |             |  |
|                    |                  |                    | "                              | Pal. N. Y.         | 3            | 409                     | 91          | 1a-3e        |          |             |  |
|                    |                  |                    | "                              | "                  | 3            | 409                     | 95          | 1-4          |          |             |  |
|                    |                  |                    | "                              | "                  | 3            | 409                     | 95          | 5-7          |          |             |  |
|                    |                  |                    | Ham.                           | <u>4620</u><br>1   | "            | penelope . . . . .Hall. | N. Y. S. M. | 13           | 79       | ....        |  |
|                    |                  |                    | "                              | "                  | Pal. N. Y.   | 4                       | 50          | 6            | 2b, c, l |             |  |
|                    |                  |                    | "                              | "                  | "            | "                       | 4           | 50           | 6        | 2d-g        |  |
|                    |                  |                    | "                              | "                  | St. G. N. Y. | 2                       | ....        | 36           | 6-8, 10  |             |  |
|                    |                  |                    | "                              | "                  | H. & C.      | "                       | 11          | ....         | 12       | 7, 8        |  |
|                    |                  |                    | "                              | "                  | Pal. N. Y.   | 8, pt. 1                | 211         | 6            | 6-8, 10  |             |  |
| "                  | <u>4620</u><br>3 | "                  | " " . . . . .Hall.             | " "                | 4            | 50                      | 6           | 2h, int.v.v. |          |             |  |
| "                  | "                | "                  | St. G. N. Y.                   | 2                  | ....         | 36                      | 11, "       |              |          |             |  |
| "                  | "                | "                  | H. & C. Pal. N. Y.             | 8, pt. 1           | 225          | 6                       | 11, "       |              |          |             |  |
| "                  | <u>4620</u><br>4 | "                  | " " . . . . .Hall.             | " "                | 4            | 50                      | 6           | 2i, "        |          |             |  |
| "                  | "                | "                  | "                              | St. G. N. Y.       | 2            | ....                    | 36          | 12, "        |          |             |  |
| "                  | "                | "                  | "                              | H. & C. Pal. N. Y. | 8, pt. 1     | 211                     | 6           | 12, "        |          |             |  |



| LOCALITY.                | REMARKS.                                                                                                      |
|--------------------------|---------------------------------------------------------------------------------------------------------------|
| Cumberland, Md.          | A silicified individual.                                                                                      |
| " "                      | A ventral valve and the umbonal part of another, silicified.                                                  |
| .....                    | As <i>Rensselæria ovoides</i> , by error.                                                                     |
| Cumberland, Md.          | Silicified umbonal parts of a dorsal and two conjoined valves.                                                |
| " "                      | A silicified individual. The loop has been broken.                                                            |
| .....                    | See <i>Megalanteris ovalis</i> .                                                                              |
| .....                    | As <i>Megalanteris ovoides</i> .                                                                              |
| Knox, N. Y.              | Three internal casts.                                                                                         |
| Schoharie, N. Y.         | Two internal casts of umbonal portion of conjoined valves.                                                    |
| Knox, N. Y.              | A somewhat exfoliated individual.                                                                             |
| Schoharie, N. Y.         | An exfoliated individual.                                                                                     |
| " "                      | A group of internal casts of this and other brachiopods.                                                      |
| " "                      | Exfoliated opposite valves, imbedded separately.                                                              |
| Knox, N. Y.              | Internal cast of a ventral valve.                                                                             |
| Schoharie, N. Y.         | A nearly entire internal cast. See also <i>Rensselæria marylandica</i> .                                      |
| .....                    | See <i>Beachia Suessana</i> .                                                                                 |
| .....                    | As <i>Orthis cleobis</i> .                                                                                    |
| Williamsville, N. Y.     | " " " Internal cast of ventral valve.                                                                         |
| .....                    | " " <i>cyclas</i> .                                                                                           |
| .....                    | " " " Two entire individuals.                                                                                 |
| .....                    | " " <i>eryna</i> .                                                                                            |
| .....                    | " " <i>æquivalvis</i> .                                                                                       |
| Williamsville, N. Y.     | " " <i>idas</i> , by error. A somewhat crushed, exfoliated individual.                                        |
| .....                    | " " <i>leucosia</i> .                                                                                         |
| .....                    | " " " "                                                                                                       |
| .....                    | " " " "                                                                                                       |
| Canandaigua L., N. Y.    | An entire individual and two opposite valves.                                                                 |
| Cumberland, Md.          | As <i>Orthis leucosia</i> . Internal cast of ventral valve.                                                   |
| Bath, Steuben Co., N. Y. | " " " ? External imprint of dorsal valve and internal cast of ventral valve, imbedded together.               |
| Cumberland, Md.          | As a type of <i>Orthis penelope</i> . Internal cast of dorsal valve.                                          |
| .....                    | " <i>Orthis musculosa</i> .                                                                                   |
| Knox, N. Y.              | " " " Three int. casts of indivs. and one ventral valve.                                                      |
| Cumberland, Md.          | " " " Two silicified individuals.                                                                             |
| " "                      | " " " " opposite valves silicified.                                                                           |
| .....                    | " " <i>penelope</i> .                                                                                         |
| 18 Mile Creek, N. Y.     | " " " A small individual and an adult dorsal valve.                                                           |
| .....                    | " " " "                                                                                                       |
| .....                    | " " " "                                                                                                       |
| York, N. Y.              | A large individual and a small ventral valve. An unfigured specimen from this locality is in the type series. |
| .....                    | As <i>Orthis penelope</i> .                                                                                   |
| .....                    | " " " "                                                                                                       |
| Canandaigua L., N. Y.    | A very perfect ventral valve.                                                                                 |
| .....                    | As <i>Orthis penelope</i> .                                                                                   |
| .....                    | " " " "                                                                                                       |
| Hamburg, N. Y.           | A very perfect ventral valve.                                                                                 |

Class BRACHIOPODA—Continued.

| Geol. Subdiv.                    | Cat. No.   | Type or Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.               | REFERENCE.   |          |      |        |                     |
|----------------------------------|------------|---------------------|------------------------------------------|--------------|----------|------|--------|---------------------|
|                                  |            |                     |                                          | Work.        | Vol.     | P.   | Pl.    | Figs.               |
| Ham.                             | 4620<br>1  | Type.               | <b>Rhipidomella</b> Ehlert— <i>Cont.</i> |              |          |      |        |                     |
|                                  |            |                     | penelope . . . . . Hall.                 | Pal. N. Y.   | 4        | 50   | 6      | 2k, <i>int.d.v.</i> |
|                                  | 4621<br>1  | “                   | “ . . . . . H. & C.                      | St. G. N. Y. | 2        | .... | 36     | 9, “                |
|                                  |            |                     | suborbicularis . . . . . Hall.           | Pal. N. Y.   | 8, pt. I | 211  | 6      | 9, “                |
|                                  | 3037<br>3  | “                   | Vanuxemi . . . . . Hall.                 | Geol. Ia.    | I, pt. 2 | 486  | 2      | 1a-c, e             |
|                                  |            |                     | “ . . . . . “                            | N. Y. S. M.  | 10       | 135  | p. 136 | 3                   |
|                                  | 3037<br>4  | “                   | “ . . . . . “                            | Geol. Ia.    | I, pt. 2 | 487  | 2      | 3a, b               |
|                                  |            |                     | “ . . . . . “                            | N. Y. S. M.  | 10       | 135  | p. 136 | 6, 7                |
|                                  | 3037<br>5  | “                   | “ . . . . . “                            | Geol. Ia.    | I, pt. 2 | 487  | 2      | 3e, f               |
|                                  |            |                     | “ . . . . . “                            | Pal. N. Y.   | 4        | 47   | 6      | 3m                  |
|                                  | 3037<br>6  | “                   | “ . . . . . “                            | Geol. Ia.    | I, pt. 2 | 487  | 2      | 2a-d, g-i           |
|                                  |            |                     | “ . . . . . “                            | “ “          | I, pt. 2 | 487  | 2      | 2e, f               |
|                                  | 3037<br>7  | “                   | “ . . . . . “                            | “ “          | I, pt. 2 | 487  | 2      | 3c, <i>int.</i>     |
|                                  |            |                     | “ . . . . . “                            | “ “          | I, pt. 2 | 487  | 2      | 3d, “               |
|                                  | 3037<br>8  | “                   | “ . . . . . “                            | Pal. N. Y.   | 4        | 47   | 6      | 3a, b, d            |
|                                  |            |                     | “ . . . . . “                            | “ “          | 4        | 47   | 6      | 3f, g               |
|                                  | 3037<br>9  | “                   | “ . . . . . “                            | “ “          | 4        | 47   | 6      | 3h-l, p             |
|                                  |            |                     | “ . . . . . H. & C.                      | St. G. N. Y. | 2        | .... | 36     | 14, <i>enl.</i>     |
|                                  | 3037<br>10 | “                   | “ . . . . . Hall.                        | Pal. N. Y.   | 8, pt. I | 225  | 6      | 14, “               |
|                                  |            |                     | “ . . . . . “                            | “ “          | 4        | 47   | 6      | 3r, <i>int.v.v.</i> |
| 3037<br>11                       | “          | “ . . . . . H. & C. | St. G. N. Y.                             | 2            | ....     | 36   | 15, “  |                     |
|                                  |            | “ . . . . . “       | “ “                                      | 11           | ....     | 12   | 9, “   |                     |
| U. H.                            | 3037<br>1  | Fig'd.              | “ (?) . . . . . Hall.                    | Pal. N. Y.   | 8, pt. I | 225  | 6      | 15, “               |
|                                  |            |                     | “ . . . . . “                            | “ “          | 4        | 40   | 5      | 6a, b               |
| Ham.                             | 4622<br>1  | Fig'd.              | “ . . . . . “                            | “ “          | 4        | 39   | 5      | 5a, b               |
|                                  |            |                     | <b>Rhynchonella</b> Fischer.             |              |          |      |        |                     |
| alveata . . . . .                |            |                     |                                          |              |          |      |        |                     |
| Barrandii . . . . .              |            |                     |                                          |              |          |      |        |                     |
| Billingsi . . . . .              |            |                     |                                          |              |          |      |        |                     |
| carolina . . . . .               |            |                     |                                          |              |          |      |        |                     |
| congregata . . . . .             |            |                     |                                          |              |          |      |        |                     |
| contracta . . . . .              |            |                     |                                          |              |          |      |        |                     |
| “ var. saxatilis . . . . .       |            |                     |                                          |              |          |      |        |                     |
| dotis . . . . .                  |            |                     |                                          |              |          |      |        |                     |
| duplicata . . . . .              |            |                     |                                          |              |          |      |        |                     |
| eximia . . . . .                 |            |                     |                                          |              |          |      |        |                     |
| Fitchana . . . . .               |            |                     |                                          |              |          |      |        |                     |
| glans-fagea . . . . .            |            |                     |                                          |              |          |      |        |                     |
| Horsfordi . . . . .              |            |                     |                                          |              |          |      |        |                     |
| multistriata . . . . .           |            |                     |                                          |              |          |      |        |                     |
| oblata . . . . .                 |            |                     |                                          |              |          |      |        |                     |
| orbicularis . . . . .            |            |                     |                                          |              |          |      |        |                     |
| pleiopleura . . . . .            |            |                     |                                          |              |          |      |        |                     |
| principalis . . . . .            |            |                     |                                          |              |          |      |        |                     |
| prolifera . . . . .              |            |                     |                                          |              |          |      |        |                     |
| Ramsayi . . . . .                |            |                     |                                          |              |          |      |        |                     |
| royana . . . . .                 |            |                     |                                          |              |          |      |        |                     |
| sappho . . . . .                 |            |                     |                                          |              |          |      |        |                     |
| septata . . . . .                |            |                     |                                          |              |          |      |        |                     |
| speciosa . . . . .               |            |                     |                                          |              |          |      |        |                     |
| stephani . . . . .               |            |                     |                                          |              |          |      |        |                     |
| <b>Rhynchospira</b> Hall.        |            |                     |                                          |              |          |      |        |                     |
| lepida . . . . .                 |            |                     |                                          |              |          |      |        |                     |
| nobilis . . . . .                |            |                     |                                          |              |          |      |        |                     |
| <b>Röemerella</b> Hall & Clarke. |            |                     |                                          |              |          |      |        |                     |
| Ham.                             | 4622<br>1  | Fig'd.              | grandis (Vanux.) . . Hall.               | Pal. N. Y.   | 4        | 17   | 2      | 33                  |



| LOCALITY.            | REMARKS.                                                                                               |
|----------------------|--------------------------------------------------------------------------------------------------------|
| .....                | As <i>Orthis penelope</i> .                                                                            |
| .....                | “ “ “                                                                                                  |
| 18 Mile Creek, N. Y. | A large dorsal valve. See also <i>Rhipidomella leucosia</i> .                                          |
| Rock Island, Ill.    | As <i>Orthis suborbicularis</i> . A crushed individual and a ventral valve.                            |
| .....                | “ “ <i>Vanuxemi</i> .                                                                                  |
| Western New York.    | “ “ “ Entire individual.                                                                               |
| .....                | “ “ “                                                                                                  |
| .....                | “ “ “                                                                                                  |
| Moscow, N. Y.        | “ “ “ A ventral valve.                                                                                 |
| Rock Island, Ill.    | “ “ “ An entire individual and two opposite valves.                                                    |
| Louisiana (?), Mo.   | “ “ “ Entire individual.                                                                               |
| Moscow, N. Y.        | “ “ “ A ventral valve.                                                                                 |
| 18 Mile Creek, N. Y. | “ “ “ A dorsal valve.                                                                                  |
| “ “ “                | “ “ “ Two entire individuals.                                                                          |
| York, N. Y.          | “ “ “ Entire individual.                                                                               |
| .....                | “ “ “                                                                                                  |
| .....                | “ “ “                                                                                                  |
| York, N. Y.          | A large, entire individual.                                                                            |
| .....                | As <i>Orthis Vanuxemi</i> .                                                                            |
| .....                | “ “ “                                                                                                  |
| .....                | .....                                                                                                  |
| Cumberland, Md.      | Internal cast of ventral valve.                                                                        |
| Nr. Caledonia, N. Y. | As <i>Orthis Vanuxemi</i> ? A ventral valve.                                                           |
| Stafford, N. Y.      | “ “ sp. An entire individual.                                                                          |
| .....                | .....                                                                                                  |
| .....                | See <i>Centronella alveata</i> .                                                                       |
| .....                | “ <i>Plethorhynchus Barrandii</i> .                                                                    |
| .....                | “ <i>Camarotæchia Billingsi</i> .                                                                      |
| .....                | “ “ <i>carolina</i> .                                                                                  |
| .....                | “ “ <i>congregata</i> .                                                                                |
| .....                | “ “ <i>contracta</i> .                                                                                 |
| .....                | “ “ “ var. <i>saxatilis</i> and <i>C. eximia</i> .                                                     |
| .....                | “ “ <i>dotis</i> .                                                                                     |
| .....                | “ “ <i>duplicata</i> .                                                                                 |
| .....                | “ “ <i>eximia</i> .                                                                                    |
| .....                | “ <i>Plethorhynchus Fitchanum</i> .                                                                    |
| .....                | “ <i>Centronella glans-fagea</i> .                                                                     |
| .....                | “ <i>Camarotæchia Horsfordi</i> .                                                                      |
| .....                | “ <i>Plethorhynchus multistriatum</i> .                                                                |
| .....                | “ “ <i>oblatum</i> .                                                                                   |
| .....                | “ <i>Camarotæchia orbicularis</i> .                                                                    |
| .....                | “ <i>Plethorhynchus pleiopleura</i> .                                                                  |
| .....                | “ “ <i>principalis</i> .                                                                               |
| .....                | “ <i>Camarotæchia polifica</i> .                                                                       |
| .....                | “ <i>Plethorhynchus Ramsayi</i> .                                                                      |
| .....                | “ <i>Camarotæchia royana</i> .                                                                         |
| .....                | “ “ <i>sappho</i> .                                                                                    |
| .....                | “ <i>Plethorhynchus septatum</i> .                                                                     |
| .....                | “ “ <i>speciosum</i> .                                                                                 |
| .....                | “ <i>Camarotæchia stevensi</i> .                                                                       |
| .....                | .....                                                                                                  |
| .....                | See <i>Trigeria lepida</i> .                                                                           |
| .....                | “ <i>Cyclorhina nobilis</i> .                                                                          |
| .....                | .....                                                                                                  |
| Onondaga Co., N. Y.  | As <i>Discina grandis</i> . A group of one lower and three upper valves, imbedded. From Pratt’s Falls. |

## Class BRACHIOPODA—Continued.

| Geol. Subdiv.      | Cat. No.          | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR. | REFERENCE.   |          |      |        |              |
|--------------------|-------------------|-------------------|----------------------------|--------------|----------|------|--------|--------------|
|                    |                   |                   |                            | Work.        | Vol.     | P.   | Pl.    | Figs.        |
| Schizophoria King. |                   |                   |                            |              |          |      |        |              |
| Chem.              | <u>4623</u><br>1  | Type.             | carinata.....Hall.         | Geol. N. Y.  | 4th D.   | 267  | ct 121 | I, Ia        |
|                    |                   |                   | "                          | Pal. N. Y.   | 4        | 58   | 8      | 30, 31       |
|                    |                   |                   | "                          | St. G. N. Y. | 2        | .... | 36     | 22, int.v.v. |
|                    |                   |                   | H. & C.                    | Pal. N. Y.   | 8, pt. I | 213  | 6      | 22, "        |
| "                  | <u>4623</u><br>2  | "                 | ".....Hall.                | "            | 4        | 58   | 8      | 32, int.d.v. |
| "                  | <u>4624</u><br>1  | "                 | impressa.....Hall.         | Geol. N. Y.  | 4th D.   | 268  | ct 121 | 2, int.v.v.  |
| "                  | "                 | "                 | "                          | Pal. N. Y.   | 4        | 60   | 8      | 11, 12       |
| "                  | <u>4624</u><br>2  | "                 | "                          | "            | 4        | 60   | 8      | 13, d. v.    |
| "                  | <u>4624</u><br>1  | "                 | "                          | "            | 4        | 60   | 8      | 15, ext.v.v. |
| "                  | <u>4624</u><br>3  | "                 | "                          | "            | 4        | 60   | 8      | 16, 17       |
| "                  | <u>4624</u><br>1  | "                 | "                          | "            | 4        | 60   | 8      | 14, int.v.v. |
|                    |                   |                   | "                          | St. G. N. Y. | 2        | .... | 36     | 31, "        |
|                    |                   |                   | H. & C.                    | "            | 11       | .... | 11     | 22, "        |
|                    |                   |                   | "                          | Pal. N. Y.   | 8, pt. I | 212  | 6      | 31, "        |
| "                  | <u>4624</u><br>4  | "                 | ".....Hall.                | "            | 4        | 60   | 8      | 18, "        |
| "                  | <u>4624</u><br>5  | "                 | "                          | "            | 4        | 60   | 8      | 19, "        |
| Ham.               | <u>4625</u><br>1  | "                 | iowensis.....Hall.         | Geol. Ia.    | 1, pt. 2 | 488  | 2      | 4a, b        |
| Chem.              | <u>4625</u><br>2  | "                 | "                          | "            | 1, pt. 2 | 488  | 2      | 4c, d        |
| Ham.               | <u>4625</u><br>1  | "                 | "                          | "            | 1, pt. 2 | 488  | 2      | 4e, int.v.v. |
| "                  | <u>4625</u><br>3  | "                 | "                          | "            | 1, pt. 2 | 488  | 2      | 4f, g        |
| "                  | <u>4625</u><br>1  | "                 | "                          | "            | 1, pt. 2 | 488  | 2      | 4h, i        |
| "                  | <u>4626</u><br>1  | "                 | " var. furnarius Hall.     | "            | 1, pt. 2 | 488  | 2      | 5, int.v.v.  |
| U. H.              | <u>3039</u><br>6  | "                 | propinqua.....Hall.        | N. Y. S. M.  | 10       | 110  | ....   | ....         |
|                    |                   |                   | "                          | Pal. N. Y.   | 4        | 43   | 5      | 3d-f         |
| Chem.              | <u>4627</u><br>1  | "                 | tioga.....Hall.            | "            | 4        | 59   | 8      | 20, 22       |
|                    |                   |                   | "                          | St. G. N. Y. | 2        | .... | 36     | 17, v. v.    |
|                    |                   |                   | H. & C.                    | Pal. N. Y.   | 8, pt. I | 212  | 6      | 17, "        |
| "                  | "                 | "                 | ".....Hall.                | "            | 4        | 59   | 8      | 21, ext.d.v. |
| "                  | "                 | "                 | "                          | Geol. N. Y.  | 4th D.   | 268  | ct 121 | 3, int. v.v. |
|                    |                   |                   | "                          | Pal. N. Y.   | 4        | 59   | 8      | 29, "        |
|                    |                   |                   | "                          | St. G. N. Y. | 2        | .... | 36     | 18, "        |
|                    |                   |                   | H. & C.                    | Pal. N. Y.   | 8, pt. I | 212  | 6      | 18, "        |
| "                  | <u>4627</u><br>2  | "                 | "                          | Geol. N. Y.  | 4th D.   | 268  | ct 121 | 4, d. v.     |
|                    |                   |                   | "                          | Pal. N. Y.   | 4        | 59   | 8      | 24, "        |
| "                  | <u>4627</u><br>1  | "                 | "                          | "            | 4        | 59   | 8      | 25, 28       |
| "                  | <u>4627</u><br>3  | "                 | "                          | "            | 4        | 59   | 8      | 26, ext.v.v. |
| "                  | <u>4627</u><br>1  | "                 | "                          | "            | 4        | 59   | 8      | 27, "        |
| "                  | <u>4627</u><br>4  | Fig'd.            | ".....Hall.                | Geol. N. Y.  | 4th D.   | 272  | ct 124 | 4            |
| Tully              | <u>4628</u><br>1  | "                 | tulliensis (Vanux.)..Hall. | Pal. N. Y.   | 4        | 55   | 7      | 5a-k         |
|                    |                   |                   | "                          | St. G. N. Y. | 2        | .... | 36     | 25-29        |
|                    |                   |                   | H. & C.                    | "            | 11       | .... | 11     | 18-20        |
|                    |                   |                   | "                          | Pal. N. Y.   | 8, pt. I | 212  | 6      | 25-29        |
| Spirifer Sowerby.  |                   |                   |                            |              |          |      |        |              |
| U. H.              | <u>3058</u><br>6  | Fig'd.            | acuminatus (Con.)..Hall.   | "            | 4        | 198  | 29     | 9, frt.      |
| "                  | <u>3058</u><br>10 | "                 | "                          | "            | 4        | 198  | 29     | 10-13        |
|                    |                   |                   | H. & C.                    | "            | 8, pt. 2 | 31   | 39     | 39, 40       |
| "                  | <u>3058</u><br>5  | "                 | ".....Hall.                | "            | 4        | 198  | 29     | 14, 15       |
| "                  | <u>3058</u><br>9  | "                 | "                          | "            | 4        | 198  | 29     | 16-18        |
| Ham.               | <u>3058</u><br>14 | "                 | "                          | "            | 4        | 234  | 35     | 25, int.v.v. |
| "                  | <u>4629</u><br>1  | Type.             | angustus.....Hall.         | N. Y. S. M.  | 10       | 164  |        |              |
|                    |                   |                   | "                          | Pal. N. Y.   | 4        | 230  | 38*    | 28-31        |
|                    |                   |                   | "                          | St. G. N. Y. | 2        | .... | 54     | 14-17        |
|                    |                   |                   | H. & C.                    | Pal. N. Y.   | 8, pt. 2 | 39   | 24     | 14-17        |



| LOCALITY.               | REMARKS.                                                                                                                               |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| .....                   | As <i>Orthis carinata</i> .                                                                                                            |
| .....                   | " " "                                                                                                                                  |
| .....                   | " " "                                                                                                                                  |
| Painted Post, N. Y.     | Exfoliated dorsal valve and int. cast ventral valve, in separate blocks.                                                               |
| Near " "                | As <i>Orthis carinata</i> . Internal cast of dorsal valve.                                                                             |
| Near Elmira, N. Y.      | " " <i>impressa</i> . " " ventral "                                                                                                    |
| " "                     | " " " Internal casts of two ventral valves.                                                                                            |
| Near Belmont, N. Y.     | " " " A somewhat exfoliated dorsal valve, imbedded.                                                                                    |
| Near Elmira, N. Y.      | " " " External imprint of ventral valve in block with figure 21, same plate. Figure made from a squeeze.                               |
| Cattaraugus Co., N. Y.  | As <i>Orthis impressa</i> . Internal casts of two ventral valves.                                                                      |
| .....                   | " " "                                                                                                                                  |
| .....                   | " " <i>propinqua</i> .                                                                                                                 |
| Near Elmira, N. Y.      | Internal cast of a ventral valve.                                                                                                      |
| Tioga Co., N. Y.        | As <i>Orthis impressa</i> . Int. cast ventral valve. From Cayuta Creek.                                                                |
| Factoryville, N. Y.     | " " " Nearly entire internal cast of ventral valve.                                                                                    |
| Rock Island, Ill.       | " " <i>iowensis</i> . Entire individual slightly crushed.                                                                              |
| Rockford, Iowa.         | " " " Individual with part of ventral valve gone.                                                                                      |
|                         | Probably = <i>Schizophoria impressa</i> .                                                                                              |
| Rock Island, Ill.       | As <i>Orthis iowensis</i> . A somewhat crushed individual from which the ventral valve has been removed.                               |
| The Bake Oven, Ill.     | As <i>Orthis iowensis</i> . Entire internal cast.                                                                                      |
| Rock Island, Ill.       | " " " Two opposite valves.                                                                                                             |
| The Bake Oven, Ill.     | " " " var. <i>furnarius</i> . Internal cast of ventral valve.                                                                          |
| .....                   | " " <i>propinqua</i> .                                                                                                                 |
| Columbus, Ohio.         | " " " A large individual.                                                                                                              |
| .....                   | " " <i>tioga</i> .                                                                                                                     |
| .....                   | " " "                                                                                                                                  |
| Near Elmira, N. Y.      | External casts of two ventral valves.                                                                                                  |
| " "                     | As <i>Orthis tioga</i> . External imprint of dorsal valve in block with original of figure 15, same plate. Figure made from a squeeze. |
| .....                   | As <i>Orthis interlineata</i> Sowerby.                                                                                                 |
| .....                   | " " <i>tioga</i> .                                                                                                                     |
| .....                   | " " "                                                                                                                                  |
| Near Elmira, N. Y.      | Internal cast of a ventral valve.                                                                                                      |
| .....                   | As <i>Orthis interlineata</i> Sowerby.                                                                                                 |
| Near Ithaca, N. Y.      | " " <i>tioga</i> . Cast of dorsal valve.                                                                                               |
| Near Elmira, N. Y.      | " " " Casts of two opposite valves.                                                                                                    |
| Belmont, N. Y.          | " " " Cast of ventral valve.                                                                                                           |
| Near Elmira, N. Y.      | " " " External imprint of ventral valve.                                                                                               |
| Nr. New Albion, N. Y.   | As type of <i>Atrypa? tenuilineata</i> Hall. Young specimen, imbedded.                                                                 |
| .....                   | " <i>Orthis tulliensis</i> .                                                                                                           |
| .....                   | " " "                                                                                                                                  |
| Tully, N. Y.            | Two individuals and an internal cast.                                                                                                  |
| Near Clarksville, N. Y. | A small, exfoliated individual.                                                                                                        |
| Near Sandusky, O.       | Entire individual.                                                                                                                     |
| Williamsville, N. Y.    | A somewhat exfoliated individual and an int. cast of ventral valve.                                                                    |
| Near Madison, Ind.      | Two siliceous internal casts. From Camp Creek.                                                                                         |
| Near Fultonham, N. Y.   | Internal cast of large ventral valve.                                                                                                  |
| Darien, N. Y.           | A rather large individual.                                                                                                             |

## Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.    | REFERENCE.   |          |      |        |                       |
|---------------|------------------|-------------------|-------------------------------|--------------|----------|------|--------|-----------------------|
|               |                  |                   |                               | Work.        | Vol.     | P.   | Pl.    | Figs.                 |
|               |                  |                   | <b>Spirifer Sowerby—Cont.</b> |              |          |      |        |                       |
| Ham.          | $\frac{4629}{2}$ | Type.             | angustus . . . . . Hall.      | Pal. N. Y.   | 4        | 230  | 38*    | 32                    |
| U. H.         | $\frac{3061}{1}$ | "                 | arctisegmentum . . . . Hall.  | N. Y. S. M.  | 10       | 131  |        |                       |
|               |                  |                   | " . . . . . "                 | Pal. N. Y.   | 4        | 208  | 31     | 9, 10                 |
| Ham.          | $\frac{3061}{3}$ | "                 | " . . . . . "                 | St. G. N. Y. | 2        | .... | 59     | 10, 11                |
|               |                  |                   | H. & C.                       | Pal. N. Y.   | 8, pt. 2 | 36   | 34     | 10, 11                |
| U. H.         | $\frac{3061}{2}$ | "                 | " . . . . . Hall.             | St. G. N. Y. | 2        | .... | 59     | 12, <i>enl.</i>       |
|               |                  |                   | H. & C.                       | Pal. N. Y.   | 8, pt. 2 | 36   | 34     | 12, "                 |
| Orisk.        | $\frac{2669}{2}$ | Fig'd.            | arenosus (Con.) . . . Hall.   | " "          | 3        | 425  | 98     | 5, <i>ext. v. v.</i>  |
| "             | $\frac{2669}{1}$ | "                 | " " . . . . . "               | " "          | 3        | 425  | 98     | 6-6b                  |
| "             | "                | "                 | " " . . . . . "               | " "          | 3        | 425  | 99     | 1, 3, 7               |
| "             | $\frac{2669}{2}$ | "                 | " " . . . . . "               | " "          | 3        | 425  | 99     | 2, <i>int. v. v.</i>  |
|               |                  |                   | " " . . . . . "               | St. G. N. Y. | 2        | .... | 55     | 5, <i>int. d. v.</i>  |
|               |                  |                   | H. & C.                       | Pal. N. Y.   | 8, pt. 2 | 24   | 30     | 5, "                  |
| "             | $\frac{2669}{1}$ | "                 | " " . . . . . Hall.           | " "          | 3        | 425  | 99     | 4, 6                  |
| "             | $\frac{2669}{2}$ | "                 | " " . . . . . "               | " "          | 3        | 425  | 99     | 5, <i>int. v. v.</i>  |
| "             | "                | "                 | " " . . . . . "               | " "          | 3        | 425  | 99     | 8, "                  |
| "             | "                | "                 | " " . . . . . "               | " "          | 3        | 425  | 99     | 9, <i>int. d. v.</i>  |
| "             | $\frac{2669}{7}$ | "                 | " " . . . . . "               | " "          | 3        | 425  | 100    | I-4                   |
|               |                  |                   | " " . . . . . "               | St. G. N. Y. | 2        | .... | 55     | 3, <i>d. v.</i>       |
|               |                  |                   | H. & C.                       | " "          | 13       | .... | 26     | 1, "                  |
| "             | "                | "                 | " " . . . . . Hall.           | Pal. N. Y.   | 8, pt. 2 | 24   | 30     | 3, "                  |
| "             | "                | "                 | " " . . . . . "               | " "          | 3        | 425  | 100    | 5-7                   |
|               |                  |                   | " " . . . . . "               | " "          | 3        | 425  | 100    | 8a, b                 |
|               |                  |                   | " " . . . . . "               | St. G. N. Y. | 2        | .... | 55     | 7, <i>card.</i>       |
|               |                  |                   | H. & C.                       | Pal. N. Y.   | 8, pt. 2 | 24   | 30     | 7, "                  |
| "             | "                | "                 | " " . . . . . Hall.           | " "          | 3        | 425  | 100    | 8c                    |
| "             | $\frac{2669}{1}$ | "                 | " " . . . . . "               | St. G. N. Y. | 2        | .... | 55     | 4, <i>int. v. v.</i>  |
|               |                  |                   | H. & C.                       | Pal. N. Y.   | 8, pt. 2 | 24   | 30     | 4, "                  |
| "             | $\frac{2669}{7}$ | "                 | " " . . . . . Hall.           | St. G. N. Y. | 2        | .... | 54     | 6, <i>hinge</i>       |
|               |                  |                   | H. & C.                       | Pal. N. Y.   | 8, pt. 2 | 24   | 30     | 6, "                  |
| "             | $\frac{2668}{2}$ | Type.             | arrectus . . . . . Hall.      | " "          | 3        | 422  | 97     | Ia-c                  |
|               |                  |                   | " " . . . . . "               | St. G. N. Y. | 2        | .... | 58     | 24, <i>ext. v. v.</i> |
|               |                  |                   | H. & C.                       | Pal. N. Y.   | 8, pt. 2 | 19   | 33     | 24, "                 |
| "             | "                | "                 | " . . . . . Hall.             | " "          | 3        | 422  | 97     | Ie, f, h              |
|               |                  |                   | " " . . . . . "               | St. G. N. Y. | 2        | .... | 58     | 25, 27                |
|               |                  |                   | H. & C.                       | Pal. N. Y.   | 8, pt. 2 | 19   | 33     | 25, 27                |
| "             | $\frac{2668}{1}$ | "                 | " . . . . . Hall.             | " "          | 3        | 422  | 97     | 2b, d, f              |
|               |                  |                   | " " . . . . . "               | St. G. N. Y. | 2        | .... | 58     | 26, <i>int. v. v.</i> |
|               |                  |                   | H. & C.                       | Pal. N. Y.   | 8, pt. 2 | 19   | 33     | 26, "                 |
| "             | "                | "                 | " . . . . . Hall.             | " "          | 3        | 422  | 97     | 2g-i                  |
| Chem.         | $\frac{4630}{1}$ | "                 | asper . . . . . Hall.         | Geol. Ia.    | 1, pt. 2 | 508  | 4      | 7a-d                  |
|               |                  |                   | H. & C.                       | Pal. N. Y.   | 8, pt. 2 | 29   | 25     | 22-24                 |
| Ham.          | $\frac{4631}{1}$ | Fig'd.            | audaculus (Con.) . . . Hall.  | Geol. N. Y.  | 4th D.   | 208  | ct. 86 | 8, 8a                 |
| "             | $\frac{4631}{2}$ | "                 | " " . . . . . "               | " "          | 4th D.   | 208  | ct. 86 | 8b, <i>int. v. v.</i> |
| "             | $\frac{4631}{3}$ | "                 | " " . . . . . "               | Pal. N. Y.   | 4        | 227  | 37     | 9, <i>d. v.</i>       |
| "             | "                | "                 | " " . . . . . "               | " "          | 4        | 227  | 38     | I, "                  |
| "             | $\frac{4631}{2}$ | "                 | " " . . . . . "               | " "          | 4        | 227  | 38     | 9-11, 17-20           |
|               |                  |                   | " " . . . . . "               | St. G. N. Y. | 2        | .... | 54     | 4, 5                  |
|               |                  |                   | H. & C.                       | " "          | 13       | .... | 28     | 2, 3                  |
| "             | $\frac{4631}{4}$ | "                 | " " . . . . . Hall.           | Pal. N. Y.   | 8, pt. 2 | 29   | 24     | 4, 5                  |
|               |                  |                   | " " . . . . . "               | " "          | 4        | 227  | 38     | 14-16                 |
|               |                  |                   | " " . . . . . "               | St. G. N. Y. | 2        | .... | 54     | 3, 6                  |
|               |                  |                   | H. & C.                       | Pal. N. Y.   | 8, pt. 2 | 29   | 24     | 3, 6                  |



| LOCALITY.            | REMARKS.                                                                                                                  |
|----------------------|---------------------------------------------------------------------------------------------------------------------------|
| Hamilton, N. Y.      | Internal cast of conjoined valves.                                                                                        |
| Williamsville, N. Y. | A somewhat broken and exfoliated individual.                                                                              |
| Scioto River, Ohio.  | Nearly entire. This specimen was collected on the Scioto river, 25 miles above Columbus, according to Dr. R. P. Mann.     |
| Clarke Co., Ind.     | A silicified individual showing the surface characters.                                                                   |
| Schoharie, N. Y.     | An exfoliated ventral valve, imbedded.                                                                                    |
| Knox, N. Y.          | Internal cast of a large individual.                                                                                      |
| “ “                  | “ casts of three ventral valves.                                                                                          |
| Schoharie, N. Y.     | Internal casts of two opposite valves in same block.                                                                      |
| Knox, N. Y.          | Two entire internal casts.                                                                                                |
| Schoharie, N. Y.     | Internal cast of ventral valve.                                                                                           |
| “ “                  | Large individual exfoliated so as to show the interior of ventral valve.                                                  |
| “ “                  | Internal cast of dorsal valve.                                                                                            |
| Cumberland, Md.      | Four silicified individuals.                                                                                              |
| “ “                  | A dorsal and two ventral valves, silicified.                                                                              |
| “ “                  | Silicified ventral valve. Some of the details of the later figures were taken from a larger, similar valve.               |
| “ “                  | The silicified spires of an average individual.                                                                           |
| Knox, N. Y.          | Entire internal cast.                                                                                                     |
| Cumberland, Md.      | A silicified dorsal valve.                                                                                                |
| Schoharie, N. Y.     | Two entire, exfoliated individuals.                                                                                       |
| “ “                  | Two opposite, exfoliated valves, imbedded. The last figure named represents the surface exactly as it is on the specimen. |
| Knox, N. Y.          | Three internal casts of conjoined valves, two of which have lost the extremity of the beak.                               |
| “ “                  | Internal cast of ventral valve and two internal casts of individuals.                                                     |
| Rockford, Iowa.      | A ventral valve and a somewhat crushed individual.                                                                        |
| Covington, N. Y.     | As type of <i>Delthyris medialis</i> Hall. Entire individual, broken at the extremities.                                  |
| Moscow, N. Y.        | As type of <i>Delthyris medialis</i> Hall. A ventral valve.                                                               |
| Darien, N. Y.        | “ <i>Spirifera medialis</i> ? An entire individual.                                                                       |
| “ “                  | “ type of <i>Spirifera medialis</i> Hall. A nearly perfect individual.                                                    |
| .....                | “ “ “ “ “                                                                                                                 |
| .....                | “ “ “ “ “                                                                                                                 |
| Moscow, N. Y.        | Two entire individuals.                                                                                                   |
| .....                | As type of <i>Spirifera medialis</i> Hall.                                                                                |
| .....                | “ “ “ “ “                                                                                                                 |
| 18 Mile Creek, N. Y. | A large individual.                                                                                                       |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.         | REFERENCE.   |          |       |         |                |
|---------------|------------------|-------------------|------------------------------------|--------------|----------|-------|---------|----------------|
|               |                  |                   |                                    | Work.        | Vol.     | P.    | Pl.     | Figs.          |
|               |                  |                   | <b>Spirifer Sowerby—Cont.</b>      |              |          |       |         |                |
| Ham.          | <u>4631</u><br>4 | Fig'd.            | audaculus (Con.) . . . Hall.       | Pal. N. Y.   | 4        | 227   | 38      | 23, 24         |
| "             | <u>4632</u><br>1 | Type.             | " var. Eatoni . . . Hall.          | N. Y. S. M.  | 10       | 157   | .....   | .....          |
|               |                  |                   | "                                  | Pal. N. Y.   | 4        | 229   | 38*     | 16-18          |
| "             | <u>4633</u><br>1 | "                 | " var. macronotus Hall.            | Geol. N. Y.  | 4th D.   | 206   | ct. 85  | 3a, b          |
| "             | "                | "                 | "                                  | Pal. N. Y.   | 4        | 231   | 38A     | 11, 12         |
| "             | "                | "                 | " " " "                            | " "          | 4        | 231   | 38A     | 1-3            |
| "             | "                | "                 | " " " "                            | " "          | 4        | 251   | 38A     | 14, 15         |
| "             | "                | "                 | " " " "                            | " "          | 4        | 231   | 38A     | 19, 21, 22     |
|               |                  |                   | "                                  | St. G. N. Y. | 2        | ..... | 54      | 21, int. v. v. |
| "             | <u>4634</u><br>1 | "                 | H. & C. bimesialis . . . . . Hall. | Pal. N. Y.   | 8, pt. 2 | ..... | 24      | 21, "          |
|               |                  |                   | "                                  | Geol. Ia.    | 1, pt. 2 | 507   | 4       | 6b-d           |
|               |                  |                   | "                                  | St. G. N. Y. | 2        | ..... | 59      | 25, d. v.      |
|               |                  |                   | H. & C. " " " "                    | " "          | 13       | ..... | 24      | 20, "          |
| "             | "                | "                 | " " " "                            | Pal. N. Y.   | 8, pt. 2 | 17    | 34      | 25, "          |
|               |                  |                   | " " " " Hall.                      | St. G. N. Y. | 2        | ..... | 59      | 23, 24         |
|               |                  |                   | H. & C. " " " "                    | Pal. N. Y.   | 8, pt. 2 | 17    | 34      | 23, 24         |
|               |                  |                   | capax . . . . .                    | .....        | .....    | ..... | .....   | .....          |
|               |                  |                   | Clintoni . . . . .                 | .....        | .....    | ..... | .....   | .....          |
| Ham.          | <u>4635</u><br>1 | "                 | consobrinus . . . d'Orbigny.       | Pr. d. Pal.  | 1        | 98    | .....   | .....          |
|               |                  |                   | Hall.                              | Geol. N. Y.  | 4th D.   | 201   | ct 80   | 5, d. v.       |
|               |                  |                   | "                                  | Pal. N. Y.   | 4        | 222   | 35      | 16, 17         |
| "             | "                | Fig'd.            | H. & C. " " " "                    | " "          | 8, pt. 2 | 36    | 37      | 9, 10          |
|               |                  |                   | " (d'Orb.) Hall.                   | " "          | 4        | 222   | 35      | 15, 18-22      |
|               |                  |                   | "                                  | St. G. N. Y. | 2        | ..... | 59      | 9, d. v.       |
| "             | "                | "                 | H. & C. " " " "                    | Pal. N. Y.   | 8, pt. 2 | 16    | 34      | 9, "           |
| "             | "                | "                 | " " " " Hall.                      | " "          | 4        | 222   | 35      | 23, int. v. v. |
| "             | <u>4635</u><br>2 | "                 | " " " " Whitf.                     | N. Y. A. S.  | 5        | 554   | 11      | 13, ext.       |
|               |                  |                   | "                                  | Geol. O.     | 7        | 448   | 7       | 13, "          |
| "             | <u>4636</u><br>1 | Type.             | corticus . . . . . Hall.           | N. Y. S. M.  | 10       | 160   | .....   | .....          |
|               |                  |                   | "                                  | Pal. N. Y.   | 4        | 236   | .....   | .....          |
| Orisk.        | <u>2731</u><br>1 | "                 | cumberlandiæ . . . . . Hall.       | N. Y. S. M.  | 10       | 63    |         |                |
|               |                  |                   | "                                  | Pal. N. Y.   | 3        | 421   | 96      | 9a, b          |
|               |                  |                   | "                                  | St. G. N. Y. | 2        | ..... | 58      | 16, 18         |
|               |                  |                   | H. & C. " " " "                    | " "          | 13       | ..... | 24      | 19, d. v.      |
| "             | "                | "                 | " " " "                            | Pal. N. Y.   | 8, pt. 2 | 17    | 33      | 16, 18         |
|               |                  |                   | " " " " Hall.                      | " "          | 3        | 421   | 96      | 9c, e          |
|               |                  |                   | "                                  | St. G. N. Y. | 2        | ..... | 58      | 17, 19, 22     |
| "             | "                | "                 | H. & C. " " " "                    | Pal. N. Y.   | 8, pt. 2 | 17    | 33      | 17, 19, 22     |
|               |                  |                   | " " " " Hall.                      | " "          | 3        | 421   | 96      | 9f, g          |
|               |                  |                   | "                                  | St. G. N. Y. | 2        | ..... | 58      | 20, 21         |
| "             | "                | "                 | H. & C. " " " "                    | Pal. N. Y.   | 8, pt. 2 | 17    | 33      | 20, 21         |
|               |                  |                   | " " " " Hall.                      | " "          | 3        | 421   | 96      | 9h             |
|               |                  |                   | cyrtiniiformis . . . . .           | .....        | .....    | ..... | .....   | .....          |
| Chem.         | <u>4637</u><br>1 | Fig'd.            | disjunctus (Sow.) . . . Hall.      | Geol. N. Y.  | 4th D.   | 269   | ct. 122 | 3, d. v.       |
| "             | <u>4637</u><br>3 | "                 | " " " " " "                        | Pal. N. Y.   | 4        | 243   | 41      | 6, d. v.       |
|               |                  |                   | "                                  | St. G. N. Y. | 2        | ..... | 55      | 15, "          |
| "             | <u>4637</u><br>2 | "                 | H. & C. " " " "                    | Pal. N. Y.   | 8, pt. 2 | 24    | 30      | 15, "          |
| "             | "                | "                 | " " " " Hall.                      | " "          | 4        | 243   | 41      | 17, "          |
| "             | "                | "                 | " " " " " "                        | " "          | 4        | 243   | 41      | 19, "          |
| "             | "                | "                 | " " " " " "                        | " "          | 4        | 243   | 42      | 20, int. d. v. |
| "             | <u>4637</u><br>1 | "                 | " " " " " "                        | Geol. N. Y.  | 4th D.   | 270   | ct. 123 | 1, v. v.       |
| U. H.         | <u>3059</u><br>3 | Type.             | divaricatus . . . . . Hall.        | N. Y. S. M.  | 10       | 133   |         |                |
|               |                  |                   | "                                  | Pal. N. Y.   | 4        | 213   | 32      | 9, int. v. v.  |
| Ham.          | <u>3059</u><br>5 | "                 | " " " " " "                        | N. Y. S. M.  | 13       | 82    | .....   | .....          |
|               |                  |                   | "                                  | Pal. N. Y.   | 4        | 213   | 32      | 2-8            |
|               |                  |                   | H. & C. " " " "                    | " "          | 8, pt. 2 | 27    | 38      | 15-17          |
|               |                  |                   | dubius . . . . .                   | .....        | .....    | ..... | .....   | .....          |



| LOCALITY.            | REMARKS.                                                                 |
|----------------------|--------------------------------------------------------------------------|
| 18 Mile Creek, N. Y. | As type of <i>Spirifera medialis</i> Hall. Two dorsal valves.            |
| .....                | " <i>Spirifer Eatoni</i> .                                               |
| Bloomfield, N. Y.    | " " <i>medialis</i> var. <i>Eatoni</i> . A partly exfoliated individual. |
| .....                | " <i>Delthyris macronota</i> .                                           |
| Moscow, N. Y.        | " <i>Spirifera</i> " A ventral valve.                                    |
| " "                  | " " " An entire individual.                                              |
| " "                  | " " " " " "                                                              |
| .....                | " " "                                                                    |
| .....                | " " "                                                                    |
| Moscow, N. Y.        | Two ventral valves.                                                      |
| Independence, Ia.    | A somewhat broken individual and a ventral valve.                        |
| " "                  | Entire individual. Area restored in figure.                              |
| .....                | See <i>Spirifer Parryanus</i> .                                          |
| .....                | " " <i>granulosus</i> var. <i>Clintoni</i> .                             |
| .....                | Proposed instead of <i>Spirifer ziczac</i> Hall, which was preoccupied.  |
| .....                | As type of <i>Delthyris zigzag</i> Hall.                                 |
| .....                | " " <i>Spirifera ziczac</i> .                                            |
| Moscow, N. Y.        | A very perfect adult.                                                    |
| .....                | As type of <i>Spirifera ziczac</i> Hall ( <i>non</i> Roemer).            |
| .....                | " " " " " " "                                                            |
| Moscow, N. Y.        | Two entire individuals.                                                  |
| " "                  | As type of <i>Spirifer ziczac</i> " " " Ventral valve.                   |
| .....                | " <i>Spirifera ziczac</i> Hall.                                          |
| Delaware, Ohio.      | " " " " Imbedded ventral valve somewhat exfoliated.                      |
| .....                | Locality incorrect.                                                      |
| Cumberland, Md.      | A silicified individual.                                                 |
| " "                  | " " "                                                                    |
| " "                  | Individual broken to show spires and a dorsal valve, silicified.         |
| " "                  | Two opposite valves, silicified.                                         |
| " "                  | The silicified spires of an individual.                                  |
| .....                | See <i>Cyrtia cyrtiniformis</i> .                                        |
| Chemung, N. Y.       | Cast. Probably the specimen used.                                        |
| Western New York.    | A nearly entire individual.                                              |
| Near Blossburgh, Pa. | Nearly entire internal cast of an individual.                            |
| " " "                | External imprint of dorsal valve. Figure made from a squeeze.            |
| " " "                | Internal cast of ventral valve.                                          |
| Chemung, N. Y.       | As type of <i>Delthyris cuspidata</i> Hall. Cast of ventral valve.       |
| Williamsville, N. Y. | Internal cast of a ventral valve.                                        |
| .....                | As type of <i>Spirifer venustus</i> Hall.                                |
| Near York, N. Y.     | A large, entire individual partly exfoliated.                            |
| .....                | See <i>Pentamerella dubia</i> .                                          |

Class BRACHIOPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.    | REFERENCE.   |          |      |        |               |
|------------------|------------------|----------------------|-------------------------------|--------------|----------|------|--------|---------------|
|                  |                  |                      |                               | Work.        | Vol.     | P.   | Pl.    | Figs.         |
| U. H.            | $\frac{3057}{4}$ | Type.                | <b>Spirifer Sowerby—Cont.</b> |              |          |      |        |               |
|                  |                  |                      | duodenarius . . . . . Hall.   | Pal. N. Y.   | 4        | 189  | 28     | 24, 26, 29-31 |
|                  |                  |                      | " " " " " "                   | St. G. N. Y. | 2        | .... | 58     | 8, 9, 13      |
|                  |                  |                      | " " " " " H. & C.             | " " "        | 13       | .... | 25     | 7, d. v.      |
|                  |                  |                      | " " " " " "                   | Pal. N. Y.   | 8, pt. 2 | 19   | 33     | 8, 9, 13      |
| "                | $\frac{3057}{5}$ | "                    | " " " " " Hall.               | " " "        | 4        | 189  | 28     | 25, 28, 32    |
| "                | "                | "                    | " " " " " "                   | " " "        | 4        | 189  | 28     | 27, ext.      |
| Ham.             | $\frac{4638}{1}$ | Fig'd.               | <i>Eatoni</i> . . . . .       |              |          |      |        |               |
|                  |                  |                      | euryteines (Owen) . . Hall.   | Pal. N. Y.   | 4        | 209  | 31     | 14-17         |
| Orisk.<br>Scho.  | $\frac{3062}{7}$ | "                    | fimbriatus (Con.) . . . Hall. | " "          | 4        | 214  | 33     | 1, ext. d. v. |
|                  | $\frac{2829}{2}$ | "                    | " " " " " "                   | " "          | 4        | 214  | 33     | 4, int. d. v. |
|                  | $\frac{3062}{1}$ | "                    | " " " " " "                   | " "          | 4        | 214  | 33     | 5, 6          |
| U. H.            | $\frac{3062}{5}$ | "                    | " " " " " "                   | " "          | 4        | 214  | 33     | 7, d. v.      |
| Ham.             | $\frac{3062}{8}$ | "                    | " " " " " "                   | " "          | 4        | 214  | 33     | 12-15         |
|                  |                  |                      | " " " " " "                   | St. G. N. Y. | 2        | .... | 61     | 21, v. v.     |
|                  |                  |                      | " " " " " H. & C.             | " " "        | 13       | .... | 25     | 11, "         |
|                  |                  |                      | " " " " " "                   | Pal. N. Y.   | 8, pt. 2 | 17   | 36     | 21, "         |
|                  |                  |                      | " " " " " Hall.               | " " "        | 4        | 214  | 33     | 20, card.     |
| "                | $\frac{3062}{9}$ | "                    | " " " " " "                   | St. G. N. Y. | 2        | .... | 61     | 22, "         |
|                  |                  |                      | " " " " " H. & C.             | Pal. N. Y.   | 8, pt. 2 | 17   | 36     | 22, "         |
|                  |                  | Type.                | formosus . . . . . Hall.      | N. Y. S. M.  | 10       | 154  |        |               |
|                  |                  |                      | " " " " " "                   | Pal. N. Y.   | 4        | 220  | 28     | 12-16         |
|                  |                  |                      | <i>granulifer</i> . . . . .   |              |          |      |        |               |
| Ham.             | $\frac{4639}{1}$ | Fig'd.               | " var. <i>Clintoni</i> . .    |              |          |      |        |               |
|                  |                  |                      | granulosus (Con.) . . . Hall. | Pal. N. Y.   | 4        | 223  | 36     | 1-3           |
|                  |                  |                      | " " " " " "                   | Geol. N. Y.  | 4th D.   | 206  | ct. 85 | 2, 2a         |
|                  |                  |                      | " " " " " "                   | Pal. N. Y.   | 4        | 223  | 36     | 5-9           |
|                  |                  |                      | " " " " " "                   | " " "        | 4        | 223  | 36     | 11, int.      |
| "                | $\frac{4639}{2}$ | "                    | " " " " " "                   | St. G. N. Y. | 2        | .... | 53     | 5-8, 10, 11   |
| "                | $\frac{4640}{1}$ | Type.                | " " " " " H. & C.             | Pal. N. Y.   | 8, pt. 2 | 29   | 23     | 5-8, 10, 11   |
|                  |                  |                      | " var. <i>Clintoni</i> Hall.  | N. Y. S. M.  | 10       | 157  | ....   |               |
|                  |                  |                      | " " " " " "                   | Pal. N. Y.   | 4        | 223  | 37     | 1-4           |
| U. H.            | $\frac{4194}{2}$ | Fig'd.               | gregarius (Clapp) . . Hall.   | N. Y. S. M.  | 10       | 127  |        |               |
|                  |                  |                      | " " " " " "                   | Pal. N. Y.   | 4        | 195  | 28     | 2, d. v.      |
|                  |                  |                      | " " " " " "                   | N. Y. S. M.  | 10       | 127  |        |               |
|                  |                  |                      | " " " " " "                   | Pal. N. Y.   | 4        | 195  | 28     | 3-6           |
|                  |                  |                      | " " " " " "                   | " " "        | 4        | 195  | 28     | 7, 8, 11      |
| "                | $\frac{2830}{4}$ | Type.                | Grieri . . . . . Hall.        | N. Y. S. M.  | 10       | 127  |        |               |
|                  |                  |                      | " " " " " "                   | Pal. N. Y.   | 4        | 194  | 28     | 17-23         |
|                  |                  |                      | " " " " " "                   | St. G. N. Y. | 2        | .... | 55     | 9-13          |
|                  |                  |                      | " " " " " H. & C.             | " " "        | 13       | .... | 27     | 6, d. v.      |
|                  |                  |                      | " " " " " "                   | Pal. N. Y.   | 8, pt. 2 | 24   | 30     | 9-13          |
| Chem.            | $\frac{4641}{1}$ | "                    | Hungerfordi . . . . . Hall.   | Geol. Ia.    | 1, pt. 2 | 501  | 4      | 1c, g, h      |
|                  |                  |                      | " " " " " H. & C.             | Pal. N. Y.   | 8, pt. 2 | 25   | 37     | 26-28         |
|                  |                  |                      | " " " " " Hall.               | Geol. Ia.    | 1, pt. 2 | 501  | 4      | 1k, int.      |
| Ham.             | $\frac{4642}{1}$ | Fig'd.               | " " " " " H. & C.             | Pal. N. Y.   | 8, pt. 2 | 25   | 37     | 30, "         |
|                  |                  |                      | iowensis (Owen) . . . Hall.   | Geol. Ia.    | 1, pt. 2 | 510  | 5      | 1a, d. v.     |
|                  |                  |                      | " " " " " H. & C.             | Pal. N. Y.   | 8, pt. 2 | 31   | 22     | 20, "         |
|                  |                  |                      | " " " " " Hall.               | Geol. Ia.    | 1, pt. 2 | 510  | 5      | 1b, card.     |
|                  |                  |                      | " " " " " H. & C.             | Pal. N. Y.   | 8, pt. 2 | 31   | 22     | 21, "         |
| "                | $\frac{4642}{3}$ | "                    | " " " " " Hall.               | Geol. Ia.    | 1, pt. 2 | 510  | 5      | 1c-e          |
| "                | "                | "                    | " " " " " H. & C.             | Pal. N. Y.   | 8, pt. 2 | 31   | 22     | 19, d. v.     |



| LOCALITY.            | REMARKS.                                                                                                                                                                                                                           |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Stafford, N. Y.      | A normal adult individual.                                                                                                                                                                                                         |
| Clarence, N. Y.      | A much exfoliated individual.                                                                                                                                                                                                      |
| “ “                  | A very large ventral valve, imbedded.                                                                                                                                                                                              |
| .....                | See <i>Spirifer audaculus</i> var. <i>Eatoni</i> .                                                                                                                                                                                 |
| Falls of Ohio River. | Individual lacking beak of dorsal valve. Schuchert says (Syn. Am. Foss. Brach., p. 389) that the specimens from the Falls of the Ohio which have been referred to this species properly belong to <i>Spirifer fornaculus</i> Hall. |
| Knox, N. Y.          | Part of an exterior imprint of a dorsal valve.                                                                                                                                                                                     |
| Schoharie, N. Y.     | Internal cast of a dorsal valve.                                                                                                                                                                                                   |
| “ “                  | A small individual.                                                                                                                                                                                                                |
| Stafford, N. Y.      | Individual of medium size.                                                                                                                                                                                                         |
| 18 Mile Creek, N. Y. | Three entire individuals from the shore of the lake.                                                                                                                                                                               |
| Hardy Co., Va.       | Internal cast of conjoined valves.                                                                                                                                                                                                 |
| The Bake Oven, Ill.  | An entire individual.                                                                                                                                                                                                              |
| .....                | See <i>Spirifer granulosus</i> .                                                                                                                                                                                                   |
| .....                | “ “ “ var. <i>Clintoni</i> .                                                                                                                                                                                                       |
| 18 Mile Creek, N. Y. | As type of <i>Spirifera granulifera</i> Hall. An entire individual.                                                                                                                                                                |
| .....                | “ “ <i>Delthyris congesta</i> Hall.                                                                                                                                                                                                |
| 18 Mile Creek, N. Y. | “ “ <i>Spirifera granulifera</i> Hall. Large, entire individual.                                                                                                                                                                   |
| “ “                  | “ “ “ “ “ Middle part of dorsal valve.                                                                                                                                                                                             |
| .....                | “ “ “ “ “                                                                                                                                                                                                                          |
| Schoharie, N. Y.     | Six internal casts as described in explanation of plate.                                                                                                                                                                           |
| .....                | As <i>Spirifer Clintoni</i> .                                                                                                                                                                                                      |
| 18 Mile Creek, N. Y. | “ <i>Spirifera granulifera</i> var. <i>Clintoni</i> . An imbedded ventral valve and an imperfect individual, imbedded.                                                                                                             |
| Near Columbus, O.    | A small individual, somewhat exfoliated.                                                                                                                                                                                           |
| Falls of Ohio River. | An individual.                                                                                                                                                                                                                     |
| “ “                  | Two ventral valves and an imbedded individual broken so as to show the interior.                                                                                                                                                   |
| Near Dayton, Ohio.   | Two individuals.                                                                                                                                                                                                                   |
| Rockford, Iowa.      | Three individuals.                                                                                                                                                                                                                 |
| “ “                  | Umbonal portion of two ventral valves.                                                                                                                                                                                             |
| .....                | As <i>Spirifer pennatus</i> Owen.                                                                                                                                                                                                  |
| Rock Island, Ill.    | “ “ <i>ligus</i> Owen (= <i>S. pennatus</i> Ow.). A somewhat crushed individual.                                                                                                                                                   |
| .....                | As <i>Spirifer pennatus</i> Owen.                                                                                                                                                                                                  |
| Independence, Iowa.  | “ “ <i>ligus</i> Owen (= <i>S. pennatus</i> Ow.). Entire individual.                                                                                                                                                               |
| .....                | “ “ <i>pennatus</i> Owen.                                                                                                                                                                                                          |
| Buffalo, Iowa.       | “ “ <i>ligus</i> Owen (= <i>S. pennatus</i> Ow.). An adult but little crushed. The locality was formerly called New Buffalo.                                                                                                       |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                 | REFERENCE.   |          |      |        |                      |
|---------------|------------------|-------------------|--------------------------------------------|--------------|----------|------|--------|----------------------|
|               |                  |                   |                                            | Work.        | Vol.     | P.   | Pl.    | Figs.                |
| Ham. Port.    | $\frac{4642}{2}$ | Fig'd.            | <b>Spirifer</b> Sowerby— <i>Cont.</i>      | Geol. Ia.    | 1, pt. 2 | 510  | 5      | If, i                |
|               | $\frac{4643}{1}$ | Type.             | iowensis ( <i>Owen</i> ).... <i>Hall.</i>  | Geol. N. Y.  | 4th D.   | 245  | ct.107 | 1, Ia                |
|               |                  |                   | laevis ..... <i>Hall.</i>                  | Pal. N. Y.   | 4        | 239  | 39     | 5, <i>area.</i>      |
|               |                  |                   | <i>H. &amp; C.</i>                         | " "          | 8, pt. 2 | 37   | 38     | 11, "                |
|               | " "              | "                 | " ..... <i>Hall.</i>                       | " "          | 4        | 239  | 39     | 1-3, 9, 10           |
|               | $\frac{4643}{2}$ | "                 | " ..... "                                  | " "          | 4        | 239  | 39     | 4, <i>d. v.</i>      |
|               | $\frac{4643}{1}$ | "                 | " ..... "                                  | " "          | 4        | 239  | 39     | 6, <i>int.</i>       |
|               | $\frac{4643}{3}$ | "                 | " ..... "                                  | " "          | 4        | 239  | 39     | 8, <i>int. v v.</i>  |
|               | $\frac{4643}{4}$ | "                 | " ..... "                                  | " "          | 4        | 239  | 39     | 11, "                |
|               |                  |                   | <i>H. &amp; C.</i>                         | St. G. N. Y. | 13       | 755  | 25     | 9, "                 |
| Scho.         | $\frac{2828}{2}$ | Type.             | ligus ..... <i>Hall.</i>                   | Pal. N. Y.   | 8, pt. 2 | 19   | 38     | 13, "                |
|               |                  |                   | macer..... <i>Hall.</i>                    | N. Y. S. M.  | 10       | 134  |        |                      |
|               |                  |                   | "                                          | Pal. N. Y.   | 4        | 190  | 27     | 19-21                |
|               |                  |                   | macronotus.....                            |              |          |      |        |                      |
|               | $\frac{3060}{2}$ | Type.             | macrothyris..... <i>Hall.</i>              | N. Y. S. M.  | 10       | 132  |        |                      |
|               |                  |                   | "                                          | Pal. N. Y.   | 4        | 202  | 30     | 17, <i>v. v.</i>     |
|               | $\frac{3060}{1}$ | "                 | " ..... "                                  | " "          | 4        | 202  | 30     | 18, 20               |
|               | " "              | "                 | " ..... "                                  | " "          | 4        | 202  | 30     | 19, <i>card.</i>     |
|               | $\frac{3064}{1}$ | Fig'd.            | maia ( <i>Billings</i> ).... <i>Hall.</i>  | " "          | 4        | 416  | 63     | 6-12                 |
|               |                  |                   | <i>H. &amp; C.</i>                         | St. G. N. Y. | 13       | .... | 29     | 2, <i>d. v.</i>      |
| Ham.          | $\frac{4191}{1}$ | Type.             | Manni ..... <i>Hall.</i>                   | Pal. N. Y.   | 8, pt. 2 | 34   | 38     | 5, "                 |
|               |                  |                   | "                                          | N. Y. S. M.  | 10       | 128  |        |                      |
|               | $\frac{4644}{1}$ | "                 | Marcy..... <i>Hall.</i>                    | Pal. N. Y.   | 4        | 211  | 31     | 24, 25               |
|               | $\frac{4644}{2}$ | "                 | " ..... "                                  | N. Y. S. M.  | 10       | 158  | p. 159 | I                    |
|               |                  |                   | "                                          | Pal. N. Y.   | 4        | 226  | 37     | 10-12                |
|               |                  |                   | medialis.....                              |              |          |      |        |                      |
|               |                  |                   | " var. <i>Eatoni</i> .....                 |              |          |      |        |                      |
|               | $\frac{4645}{1}$ | Type.             | mesicostalis..... <i>Hall.</i>             | Geol. N. Y.  | 4th D.   | 269  | ct.122 | 2, <i>v. v.</i>      |
|               |                  |                   | "                                          | Pal. N. Y.   | 4        | 240  | 40     | 8, "                 |
|               | $\frac{4645}{2}$ | "                 | " ..... "                                  | " "          | 4        | 240  | 40     | I, 2                 |
| Chem.         | $\frac{4645}{3}$ | "                 | " ..... "                                  | " "          | 4        | 240  | 40     | 3, <i>d. v.</i>      |
|               | $\frac{4645}{4}$ | "                 | " ..... "                                  | " "          | 4        | 240  | 40     | 4, 7                 |
|               | $\frac{4645}{1}$ | "                 | " ..... "                                  | " "          | 4        | 240  | 40     | 5, <i>d. v.</i>      |
|               | $\frac{4645}{5}$ | "                 | " ..... "                                  | " "          | 4        | 240  | 40     | 6, 12                |
|               | $\frac{4645}{6}$ | "                 | " ..... "                                  | " "          | 4        | 240  | 40     | 9, <i>int. d. v.</i> |
|               | $\frac{4645}{7}$ | "                 | " ..... "                                  | " "          | 4        | 240  | 40     | 10, "                |
|               | $\frac{4645}{8}$ | "                 | " ..... "                                  | " "          | 4        | 240  | 40     | 13, <i>card.</i>     |
|               |                  |                   | <i>H. &amp; C.</i>                         | St. G. N. Y. | 2        | .... | 59     | 32, 34               |
|               | $\frac{4645}{2}$ | Fig'd.            | " ..... <i>Hall.</i>                       | Pal. N. Y.   | 8, pt. 2 | 16   | 34     | 32, 34               |
|               |                  |                   | "                                          | Geol. N. Y.  | 4th D.   | 271  | ct.123 | 5, 5a                |
| Ham.          | $\frac{4646}{1}$ | Type.             | mesistrialis..... <i>Hall.</i>             | " "          | 4th D.   | 269  | ct.122 | I, Ia                |
|               |                  |                   | "                                          | Pal. N. Y.   | 4        | 242  | 40     | 18, <i>d. v.</i>     |
|               |                  |                   | <i>H. &amp; C.</i>                         | " "          | 8, pt. 2 | 14   | 37     | 4, "                 |
|               | $\frac{4646}{2}$ | "                 | " ..... <i>Hall.</i>                       | " "          | 4        | 242  | 40     | 14, "                |
|               | $\frac{4646}{3}$ | "                 | " ..... "                                  | " "          | 4        | 242  | 40     | 15, 17               |
|               | $\frac{4646}{4}$ | "                 | " ..... "                                  | " "          | 4        | 242  | 40     | 16, <i>d. v.</i>     |
|               | $\frac{4646}{1}$ | "                 | " ..... "                                  | " "          | 4        | 242  | 40     | 20, 21               |
|               | $\frac{4647}{1}$ | Fig'd.            | mucronatus ( <i>Con.</i> )... <i>Hall.</i> | Geol. N. Y.  | 4th D.   | 198  | ct.79  | 3                    |
|               | $\frac{4647}{2}$ | "                 | " " " "                                    | " "          | 4th D.   | 271  | ct.123 | 3                    |
|               | $\frac{4647}{3}$ | "                 | " " " "                                    | Pal. N. Y.   | 4        | 216  | 34     | 8, <i>d. v.</i>      |
| Chem.         | $\frac{4647}{4}$ | "                 | " " " "                                    | " "          | 4        | 216  | 34     | 10, 18               |



| LOCALITY.                                   | REMARKS.                                                                                                      |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Independence, Iowa.<br>.....                | As <i>Spirifer pennata</i> Owen. An adult.<br>" <i>Delthyris lævis</i> .                                      |
| West side of Cayuga<br>Lake, N. Y.<br>" " " | A somewhat crushed individual and a ventral valve.<br>Four internal casts and a crushed individual.           |
| Cortland Co., N. Y.                         | Internal cast of dorsal valve.                                                                                |
| West side of Cayuga<br>Lake, N. Y.          | Part of a large ventral valve.                                                                                |
| Portland Harbor, N.Y.                       | Cast of ventral valve.                                                                                        |
| <br>Cortland, N. Y.<br>.....                | <br>Internal cast of ventral valve, somewhat broken.<br>See <i>Spirifer iowensis</i> .                        |
| <br>Albany Co., N. Y.<br>.....              | <br>Internal cast retaining some shell.<br>See <i>Spirifer audaculus</i> var. <i>macronotus</i> .             |
| Clarence Hollow, N.Y.                       | Internal cast of ventral valve retaining some shell.                                                          |
| Williamsville, N. Y.                        | Internal cast retaining some of dorsal valve and the internal cast of<br>a ventral valve.                     |
| " "                                         | A partly silicified, somewhat imperfect individual.                                                           |
| <br>St. Mary's, Ont.                        | <br>Three partly exfoliated individuals.                                                                      |
| Williamsville, N. Y.                        | A somewhat exfoliated individual.                                                                             |
| Covington, N. Y.                            | A nearly entire individual, slightly crushed.                                                                 |
| Cayuga Lake, N. Y.                          | A small individual. A large individual from Dresden, N. Y., is in<br>the type series, but it was not figured. |
| .....                                       | See <i>Spirifer audaculus</i> .                                                                               |
| .....                                       | " " " var. <i>Eatoni</i> .                                                                                    |
| .....                                       | As <i>Delthyris mesacostalis</i> .                                                                            |
| Angelica, N. Y.                             | An exfoliated ventral valve.                                                                                  |
| Ithaca, N. Y.                               | Casts of two opposite valves, imbedded with many others.                                                      |
| " "                                         | Cast of dorsal valve.                                                                                         |
| Belmont, N. Y.                              | Two opposite valves, imbedded separately.                                                                     |
| Steuben Co., N. Y.                          | Cast of ventral valve. From southern part of the county.                                                      |
| Angelica, N. Y.                             | Two ventral valves.                                                                                           |
| Near Elmira, N. Y.                          | Cast of ventral valve retaining some shell along hinge line.                                                  |
| Painted Post, N. Y.                         | Internal cast of a small ventral valve.                                                                       |
| Near Friendship, N.Y.                       | A ventral valve, imbedded.                                                                                    |
| <br>Allegany Co., N. Y.                     | <br>A small, somewhat imperfect individual.                                                                   |
| Ithaca, N. Y.                               | As type of <i>Delthyris acuminata</i> Hall. Casts of two opposite valves,<br>in separate blocks.              |
| .....                                       | As <i>Delthyris mesastrialis</i> .                                                                            |
| <br>Cayuta Creek, N. Y.                     | <br>Internal casts of two opposite valves in same block. Tioga county.                                        |
| Nr. Binghamton, N.Y.                        | Cast.                                                                                                         |
| Jefferson, N. Y.                            | Casts of two dorsal valves.                                                                                   |
| Cortland, N. Y.                             | Cast of dorsal valve showing fine striæ very distinctly.                                                      |
| Cayuta Creek, N. Y.                         | A partly exfoliated ventral valve, imb., and internal cast of another.                                        |
| Moscow, N. Y.                               | As <i>Delthyris mucronata</i> . An imbedded individual doubtfully<br>referred to these figures.               |
| <br>Ithaca, N. Y.                           | <br>As <i>Delthyris mucronata</i> ? Internal cast of ventral valve.                                           |
| Bosanquet, Ont.                             | A rotund individual.                                                                                          |
| 18 Mile Creek, N. Y.                        | A flat individual and one of ordinary form.                                                                   |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                          | REFERENCE.   |          |      |      |                  |
|---------------|------------------|-------------------|-------------------------------------------------------------------------------------|--------------|----------|------|------|------------------|
|               |                  |                   |                                                                                     | Work.        | Vol      | P.   | Pl.  | Figs.            |
| Ham.          | <u>4647</u><br>5 | Fig'd.            | <b>Spirifer</b> Sowerby— <i>Cont.</i><br>mucronatus ( <i>Con.</i> )... <i>Hall.</i> | Pal. N. Y.   | 4        | 216  | 34   | 23, <i>int.</i>  |
|               |                  |                   | "                                                                                   | St. G. N. Y. | 2        | .... | 59   | 17, "            |
|               |                  |                   | <i>H. &amp; C.</i>                                                                  | Pal. N. Y.   | 8, pt. 2 | 17   | 34   | 17, "            |
| "             | <u>4648</u><br>1 | Type.             | Oweni ..... <i>Hall.</i>                                                            | N. Y. S. M.  | 10       | 129  |      |                  |
|               |                  |                   | "                                                                                   | Pal. N. Y.   | 4        | 197  | 29   | 1, <i>d. v.</i>  |
| "             | <u>4648</u><br>2 | "                 | " .....                                                                             | "            | 4        | 197  | 29   | 2-7              |
|               |                  |                   | "                                                                                   | St. G. N. Y. | 2        | .... | 52   | 1, 2             |
|               |                  |                   | <i>H. &amp; C.</i>                                                                  | Pal. N. Y.   | 8, pt. 2 | 28   | 22   | 1, 2             |
| "             | "                | "                 | " ..... <i>Hall.</i>                                                                | St. G. N. Y. | 2        | .... | 52   | 3, 4, 6          |
|               |                  |                   | <i>H. &amp; C.</i>                                                                  | Pal. N. Y.   | 8, pt. 2 | 28   | 22   | 3, 4, 6          |
| "             | "                | "                 | " ..... <i>Hall.</i>                                                                | St. G. N. Y. | 2        | .... | 52   | 7, <i>enl.</i>   |
|               |                  |                   | <i>H. &amp; C.</i>                                                                  | Pal. N. Y.   | 8, pt. 2 | 28   | 22   | 7, "             |
| "             | <u>4649</u><br>1 | "                 | Parryanus ..... <i>Hall.</i>                                                        | Geol. Ia.    | 1, pt. 2 | 509  | 4    | 8a, b            |
|               |                  |                   | "                                                                                   | St. G. N. Y. | 2        | .... | 52   | 8, 9             |
|               |                  |                   | <i>H. &amp; C.</i>                                                                  | Pal. N. Y.   | 8, pt. 2 | 29   | 22   | 8, 9             |
| "             | <u>4649</u><br>2 | "                 | " ..... <i>Hall.</i>                                                                | Geol. Ia.    | 1, pt. 2 | 520  | 7    | 7a-d             |
|               |                  |                   | "                                                                                   | St. G. N. Y. | 2        | .... | 52   | 15, 16           |
|               |                  |                   | <i>H. &amp; C.</i>                                                                  | Pal. N. Y.   | 8, pt. 2 | 29   | 22   | 15, 16           |
|               |                  |                   | <i>pennatus</i> .....                                                               |              |          |      |      |                  |
| Ham.          | <u>4650</u><br>1 | Type.             | pertenuis..... <i>Hall.</i>                                                         | N. Y. S. M.  | 10       | 163  |      |                  |
|               |                  |                   | "                                                                                   | Pal. N. Y.   | 4        | 236  | .... |                  |
|               |                  |                   | <i>pyxidatus</i> .....                                                              |              |          |      |      |                  |
| U. H.         | <u>3066</u><br>1 | Fig'd.            | raricosta ( <i>Con.</i> )..... <i>Hall.</i>                                         | Pal. N. Y.   | 4        | 192  | 27   | 34, <i>v. v.</i> |
| "             | "                | "                 | " " " " " " " "                                                                     | "            | 4        | 192  | 30   | 7, <i>ext.</i>   |
| "             | <u>3066</u><br>2 | "                 | " " " " " " " "                                                                     | St. G. N. Y. | 2        | .... | 60   | 14, <i>enl.</i>  |
|               |                  |                   | <i>H. &amp; C.</i>                                                                  | Pal. N. Y.   | 8, pt. 2 | 16   | 35   | 14, "            |
| "             | <u>3066</u><br>5 | "                 | " " " " " " " "                                                                     | St. G. N. Y. | 2        | .... | 60   | 15, <i>int.</i>  |
|               |                  |                   | <i>H. &amp; C.</i>                                                                  | "            | 13       | .... | 24   | 2, "             |
|               |                  |                   | "                                                                                   | Pal. N. Y.   | 8, pt. 2 | 16   | 35   | 15, "            |
| Ham.          | <u>4651</u><br>1 | Type.             | sculptilis ..... <i>Hall.</i>                                                       | "            | 4        | 221  | 35   | 10, <i>d. v.</i> |
| Orisk.        | <u>2733</u><br>1 | "                 | submucronatus..... <i>Hall.</i>                                                     | N. Y. S. M.  | 10       | 62   |      |                  |
|               |                  |                   | "                                                                                   | Pal. N. Y.   | 3        | 419  | 96   | 7a-f             |
| "             | "                | "                 | " " " " " " " "                                                                     | St. G. N. Y. | 2        | .... | 58   | 5-7              |
|               |                  |                   | <i>H. &amp; C.</i>                                                                  | "            | 13       | .... | 24   | 17, 18           |
|               |                  |                   | "                                                                                   | Pal. N. Y.   | 8, pt. 2 | 17   | 33   | 5-7              |
| Mar.          | <u>4378</u><br>1 | "                 | subumbona..... <i>Hall.</i>                                                         | N. Y. S. M.  | 10       | 168  | .... |                  |
|               |                  |                   | "                                                                                   | "            | 13       | 71   | .... |                  |
|               |                  |                   | "                                                                                   | Pal. N. Y.   | 4        | 234  | 33   | 22-30            |
| Ham.          | <u>4378</u><br>2 | "                 | " ..... " "                                                                         | N. Y. S. M.  | 10       | 168  | .... |                  |
| "             | <u>4652</u><br>1 | "                 | tenuis..... <i>Hall.</i>                                                            | "            | 10       | 162  |      |                  |
|               |                  |                   | "                                                                                   | Pal. N. Y.   | 4        | 236  | .... |                  |
| Orisk.        | <u>2732</u><br>1 | "                 | tribulis..... <i>Hall.</i>                                                          | "            | 3        | 420  | 96   | 8a-e             |
|               |                  |                   | "                                                                                   | St. G. N. Y. | 2        | .... | 58   | 1, <i>d. v.</i>  |
|               |                  |                   | <i>H. &amp; C.</i>                                                                  | Pal. N. Y.   | 8, pt. 2 | 19   | 33   | 1, "             |
| Ham.          | <u>4653</u><br>1 | "                 | varicosus ..... <i>Hall.</i>                                                        | N. Y. S. M.  | 10       | 130  |      |                  |
|               |                  |                   | "                                                                                   | Pal. N. Y.   | 4        | 205  | 31   | 1-4              |
|               |                  |                   | "                                                                                   | St. G. N. Y. | 2        | .... | 59   | 4-8              |
|               |                  |                   | <i>H. &amp; C.</i>                                                                  | Pal. N. Y.   | 8, pt. 2 | 17   | 34   | 4-8              |
|               |                  |                   | <i>venustus</i> .....                                                               |              |          |      |      |                  |
| Ham.          | <u>4654</u><br>1 | Type.             | Wortheni..... <i>Hall.</i>                                                          | N. Y. S. M.  | 10       | 156  |      |                  |
|               |                  |                   | <i>H. &amp; C.</i>                                                                  | Pal. N. Y.   | 8, pt. 2 | 31   | 27   | 19, 20           |
|               |                  |                   | <i>ziczac</i> Hall (non Roemer).                                                    |              |          |      |      |                  |
|               |                  |                   | <i>Spirigera</i> d'Orbigny.....                                                     |              |          |      |      |                  |
|               |                  |                   | <i>spiriferoides</i> .....                                                          |              |          |      |      |                  |



| LOCALITY.                    | REMARKS.                                                                                                               |
|------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Darien, N. Y.                | A dorsal valve.                                                                                                        |
| Louisville, Ky.              | A small individual from the Falls of the Ohio river.                                                                   |
| Clarke Co., Ind.             | Two silicified individuals.                                                                                            |
| “ “                          | The umbonal portion of the valves of an individual.                                                                    |
| “ “                          | An individual.                                                                                                         |
| Buffalo, Iowa.               | An individual and a somewhat crushed ventral valve.                                                                    |
| .....                        | As type of <i>Spirifer capax</i> .                                                                                     |
| .....                        | “ “ “ “                                                                                                                |
| Mth. of Pine Crk., Ia.       | Entire internal cast.                                                                                                  |
| .....                        | See <i>Spirifer iowensis</i> .                                                                                         |
| Cumberland, Md.              | Two silicified individuals with shell partly gone.                                                                     |
| .....                        | See <i>Metaplasia pyxidata</i> .                                                                                       |
| Stafford, N. Y.              | An exfoliated, imbedded ventral valve doubtfully referred to this species.                                             |
| “ “                          | A ventral valve, imbedded.                                                                                             |
| Schoharie, N. Y.             | Individual preserving middle of cardinal area very perfectly.                                                          |
| Clarke Co., Ind.             | The middle portion of a large ventral valve.                                                                           |
| 18 Mile Creek, N. Y.         | Internal cast of a dorsal valve retaining some shell.                                                                  |
| Cumberland, Md.              | Two silicified individuals and a ventral valve.                                                                        |
| “ “                          | A silicified individual.                                                                                               |
| .....                        | As <i>Orthis subumbona</i> .                                                                                           |
| .....                        | “ <i>Ambocælia subumbonata</i> (typographical error).                                                                  |
| Near Alden, N. Y.            | Three exfoliated individuals.                                                                                          |
| Shore of Lake Erie,<br>N. Y. | As <i>Orthis subumbona</i> . A block bearing a score of individuals used in the original description, but not figured. |
| Cumberland, Md.              | A silicified individual with part of shell missing.                                                                    |
| “ “                          | Two silicified individuals.                                                                                            |
| Falls of Ohio River.         | Two individuals and two detached valves, silicified.                                                                   |
| .....                        | See <i>Spirifer divaricatus</i> .                                                                                      |
| Near Hamburg, Ill.           | Partly exfoliated.                                                                                                     |
| .....                        | See <i>Spirifer consobrinus</i> .                                                                                      |
| .....                        | Synonym of <i>Athyris</i> .                                                                                            |
| .....                        | See <i>Athyris spiriferoides</i> .                                                                                     |

## Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No. | Type or Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.        | REFERENCE.   |          |       |       |                |
|---------------|----------|---------------------|-----------------------------------|--------------|----------|-------|-------|----------------|
|               |          |                     |                                   | Work.        | Vol.     | P.    | Pl.   | Figs.          |
|               |          |                     | <b>Stenocisma</b> Conrad.....     | .....        | .....    | ..... | ..... | .....          |
|               |          |                     | <b>Streptorhynchus</b> King.      |              |          |       |       |                |
|               |          |                     | <i>chemungense</i> .....          | .....        | .....    | ..... | ..... | .....          |
|               |          |                     | " var. <i>arctostriatum</i> ..... | .....        | .....    | ..... | ..... | .....          |
|               |          |                     | " " <i>pandora</i> .....          | .....        | .....    | ..... | ..... | .....          |
|               |          |                     | " " <i>perversum</i> ...          | .....        | .....    | ..... | ..... | .....          |
|               |          |                     | <i>hipparionyx</i> .....          | .....        | .....    | ..... | ..... | .....          |
|               |          |                     | <b>Strophalosia</b> King.         |              |          |       |       |                |
| Chem.         | 4655     | Type.               | <i>hystriacula</i> .....Hall.     | Pal. N. Y.   | 4        | 178   | 26    | 4, v. v.       |
| Mar.          | 4377     | "                   | <i>truncata</i> .....Hall.        | N. Y. S. M.  | 10       | 171   | ..... | .....          |
|               |          |                     | " " " " " "                       | Pal. N. Y.   | 4        | 160   | 23    | 14, d. v.      |
| "             | "        | "                   | " " " " " "                       | " "          | 4        | 160   | 23    | 15, v. v. X 2  |
| "             | 4377     | "                   | " " " " " "                       | " "          | 4        | 160   | 23    | 17-20          |
|               | 4        |                     | " " " " " "                       | St. G. N. Y. | 2        | ....  | 17    | 12, 13         |
|               |          |                     | " " " " " " H. & C.               | " "          | 11       | ....  | 21    | 3, 4           |
|               |          |                     | " " " " " " "                     | Pal. N. Y.   | 8, pt. I | 316   | 17    | 12, 13         |
| Ham.          | 4377     | "                   | " " " " " " Hall.                 | " "          | 4        | 160   | 23    | 21, d. v. X 2  |
|               | 5        |                     |                                   |              |          |       |       |                |
| "             | 4377     | "                   | " " " " " " "                     | " "          | 4        | 160   | 23    | 22, 24         |
|               | 6        |                     |                                   |              |          |       |       |                |
| Mar.          | 4377     | "                   | " " " " " " "                     | Geol. N. Y.  | 4th D.   | 181   | ct 71 | 4, int.        |
|               | 1        |                     | " " " " " " "                     | N. Y. S. M.  | 10       | 172   | ..... | .....          |
|               |          |                     | " " " " " " "                     | Pal. N. Y.   | 4        | ....  | 23    | 12, int. X 2   |
|               |          |                     | " " " " " " "                     | St. G. N. Y. | 2        | ....  | 48    | 10, "          |
|               |          |                     | " " " " " " " H. & C.             | " "          | 11       | ....  | 21    | 1, "           |
|               |          |                     | " " " " " " "                     | Pal. N. Y.   | 8, pt. I | 3, 6  | 17    | 10, "          |
|               |          |                     | <b>Stropheodonta</b> Hall.        |              |          |       |       |                |
| Ham.          | 4656     | Type.               | <i>concava</i> .....Hall.         | N. Y. S. M.  | 10       | 140   | ..... | .....          |
|               | 1        |                     | " " " " " " "                     | Pal. N. Y.   | 4        | 96    | 16    | 1h, int.       |
|               |          |                     | " " " " " " "                     | St. G. N. Y. | 2        | ....  | 45    | 22, "          |
|               |          |                     | " " " " " " " H. & C.             | Pal. N. Y.   | 8, pt. I | ....  | 14    | 22, "          |
| "             | 4657     | Fig'd Sp. and G. T. | <i>demissa</i> (Con.).....Hall.   | " "          | 4        | 101   | 17    | 2b, f, g, n    |
| "             | "        | "                   | " " " " " " "                     | " "          | 4        | 101   | 17    | 2d, r          |
|               |          |                     | " " " " " " "                     | St. G. N. Y. | 2        | ....  | 45    | 7, 12          |
|               |          |                     | " " " " " " " H. & C.             | " "          | 11       | 281   | 14    | 3, int. v. v.  |
|               |          |                     | " " " " " " "                     | Pal. N. Y.   | 8, pt. I | 286   | 14    | 7, 12          |
| "             | "        | "                   | " " " " " " " Hall.               | " "          | 4        | 101   | 17    | 2S, int. d. v. |
|               |          |                     | " " " " " " "                     | St. G. N. Y. | 2        | ....  | 45    | 11, "          |
|               |          |                     | " " " " " " " H. & C.             | Pal. N. Y.   | 8, pt. I | 286   | 14    | 11, "          |
| Chem.         | 4657     | "                   | " " " " " " " Hall.               | " "          | 4        | 114   | 19    | 8, v. v.       |
| "             | 2        | "                   | " " " " " " "                     | " "          | 4        | 114   | 19    | 9, "           |
| "             | 3        | "                   | " " " " " " "                     | " "          | 4        | 114   | 19    | 10, "          |
| "             | 4657     | "                   | " " " " " " "                     | " "          | 4        | 114   | 19    | 11, "          |
| "             | 4        | "                   | " " " " " " "                     | " "          | 4        | 114   | 19    | 11, "          |
| "             | 4657     | "                   | " " " " " " "                     | " "          | 4        | 114   | 19    | 11, "          |
| "             | 5        | "                   | " " " " " " "                     | " "          | 4        | 114   | 19    | 11, "          |
| U. H.         | 3040     | Type.               | <i>hemispherica</i> .....Hall.    | N. Y. S. M.  | 10       | 113   | ..... | .....          |
|               | 2        |                     | " " " " " " "                     | Pal. N. Y.   | 4        | 90    | 13    | 12, 13         |
| "             | 3040     | "                   | " " " " " " "                     | " "          | 4        | 90    | 14    | 2a, b          |
| "             | 11       | "                   | " " " " " " "                     | " "          | 4        | 90    | 14    | 2c, int.       |
| "             | 3040     | "                   | " " " " " " "                     | " "          | 4        | 90    | 14    | 2d, v. v.      |
| "             | 10       | "                   | " " " " " " "                     | " "          | 4        | 90    | 14    | 2d, v. v.      |
| Scho.         | 2819     | "                   | <i>inæquiradiata</i> .....Hall.   | N. Y. S. M.  | 10       | 113   | ..... | .....          |
|               | 1        |                     | " " " " " " "                     | Pal. N. Y.   | 4        | 87    | 11    | 26, 31         |
| U. H.         | 2819     | "                   | " " " " " " "                     | " "          | 4        | 87    | 12    | 12, int. v. v. |
|               | 5        |                     | " " " " " " "                     | St. G. N. Y. | 2        | ....  | 45    | 13, "          |
|               |          |                     | " " " " " " " H. & C.             | Pal. N. Y.   | 8, pt. I | ....  | 14    | 13, "          |



| LOCALITY.              | REMARKS.                                                                                                                                                                                                                                               |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                  | The species which were placed under this genus in Pal. N. Y., vol. 4, were removed to the new genus <i>Camarotæchia</i> in Pal. N. Y., vol. 8, pt. 2, and will be found under that name in this Catalogue, as far as their types exist in this Museum. |
| .....                  | See <i>Orthotheses chemungensis</i> .                                                                                                                                                                                                                  |
| .....                  | “ “ “ var. <i>arctostriatus</i> .                                                                                                                                                                                                                      |
| .....                  | “ “ “ “ <i>pandora</i> .                                                                                                                                                                                                                               |
| .....                  | “ “ “ “ <i>perversum</i> .                                                                                                                                                                                                                             |
| .....                  | “ <i>Hipparionyx proximus</i> .                                                                                                                                                                                                                        |
| Forestville, N. Y.     | As <i>Productella hystricula</i> . Cast of ventral valve.                                                                                                                                                                                              |
| .....                  | “ <i>Productus truncatus</i> .                                                                                                                                                                                                                         |
| Avon, N. Y.            | “ <i>Productella truncata</i> . External imprint of dorsal valve.                                                                                                                                                                                      |
| “ “                    | “ “ “ Exfoliated ventral valve, imbedded.                                                                                                                                                                                                              |
| .....                  | “ “ “                                                                                                                                                                                                                                                  |
| .....                  | “ “ “                                                                                                                                                                                                                                                  |
| Schoharie, N. Y.       | Two imbedded individuals.                                                                                                                                                                                                                              |
| Lake Erie Shore, N. Y. | As <i>Productella truncata</i> . An exfoliated dorsal valve, imbedded.                                                                                                                                                                                 |
| “ “                    | From 11 miles south of Buffalo.                                                                                                                                                                                                                        |
| “ “                    | As <i>Productella truncata</i> . Two opposite valves, imbedded together.                                                                                                                                                                               |
| .....                  | From 10 miles south of Buffalo.                                                                                                                                                                                                                        |
| .....                  | As type of <i>Strophomena pustulosa</i> Hall.                                                                                                                                                                                                          |
| .....                  | “ <i>Productus</i> — .                                                                                                                                                                                                                                 |
| .....                  | “ <i>Productella truncata</i> .                                                                                                                                                                                                                        |
| .....                  | “ “ “                                                                                                                                                                                                                                                  |
| Avon, N. Y.            | Internal cast of dorsal valve.                                                                                                                                                                                                                         |
| .....                  | As <i>Strophomena (Strophodonta) concava</i> .                                                                                                                                                                                                         |
| Canandaigua L., N. Y.  | A large ventral valve. See also <i>Stropheodonta hemispherica</i> .                                                                                                                                                                                    |
| Darien, N. Y.          | Three entire individuals.                                                                                                                                                                                                                              |
| “ “                    | An entire individual and a ventral valve.                                                                                                                                                                                                              |
| “ “                    | A dorsal valve.                                                                                                                                                                                                                                        |
| Chemung Creek, N. Y.   | Internal cast of a distorted ventral valve.                                                                                                                                                                                                            |
| Schuyler Co., N. Y.    | “ “ “ “ “ retaining some shell.                                                                                                                                                                                                                        |
| Bath, N. Y.            | “ “ ventral valve. Steuben county.                                                                                                                                                                                                                     |
| Western New York.      | “ “ “ “                                                                                                                                                                                                                                                |
| .....                  | As <i>Strophomena (Strophodonta) hemispherica</i> .                                                                                                                                                                                                    |
| Fort Colborne, Ont.    | A somewhat exfoliated, nearly entire individual.                                                                                                                                                                                                       |
| Louisville, Ky.        | As <i>Strophodonta concava</i> in expl. plate, by error. Ventral valve.                                                                                                                                                                                |
| Falls of Ohio River.   | Like preceding. Two imbedded dorsal valves, from which figure was made.                                                                                                                                                                                |
| Columbus, Ohio.        | Like preceding. Internal cast of ventral valve.                                                                                                                                                                                                        |
| .....                  | As <i>Strophomena (Strophodonta) inequiradiata</i> .                                                                                                                                                                                                   |
| Albany Co., N. Y.      | Internal cast of ventral valve and external imprint of dorsal valve.                                                                                                                                                                                   |
| .....                  | Somewhat doubtfully referred to this species.                                                                                                                                                                                                          |
| Avon, N. Y.            | Internal cast of ventral valve.                                                                                                                                                                                                                        |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                         | REFERENCE.   |          |      |         |                       |
|---------------|------------------|-------------------|----------------------------------------------------|--------------|----------|------|---------|-----------------------|
|               |                  |                   |                                                    | Work.        | Vol.     | P.   | Pl.     | Figs.                 |
| U. H.         | $\frac{2819}{8}$ | Type.             | <b>Stropheodonta</b> Hall—Cont.                    |              |          |      |         |                       |
| "             | $\frac{2819}{4}$ | "                 | <i>inæquiradiata</i> . . . . . Hall.               | Pal. N. Y.   | 4        | 87   | 13      | 6, <i>ext. v. v.</i>  |
| "             | $\frac{2819}{3}$ | "                 | " . . . . . "                                      | " "          | 4        | 87   | 13      | 7, "                  |
| "             | $\frac{2819}{5}$ | "                 | " . . . . . "                                      | " "          | 4        | 87   | 13      | 8, 9                  |
|               |                  |                   | " . . . . . "                                      | " "          | 4        | 87   | 13      | 10, 11                |
|               |                  |                   | " . . . . . "                                      | St. G. N. Y. | 2        | .... | 45      | 14, <i>enl.</i>       |
|               |                  |                   | <i>H. &amp; C.</i>                                 | Pal. N. Y.   | 8, pt. I | .... | 14      | 14, "                 |
| Orisk.        | $\frac{2661}{2}$ | "                 | <i>Lincklæni</i> . . . . . Hall.                   | N. Y. S. M.  | 10       | 55   | ....    | ....                  |
| "             | "                | Fig'd.            | " ? . . . . . "                                    | Pal. N. Y.   | 3        | 415  | 93      | 3a, b                 |
| "             | $\frac{2662}{2}$ | Type.             | <i>magniventer</i> . . . . . Hall.                 | N. Y. S. M.  | 10       | 54   | ....    | ....                  |
|               |                  |                   | " . . . . . "                                      | Pal. N. Y.   | 3        | 411  | 92      | 2a-c, 3               |
|               |                  |                   | " . . . . . "                                      | St. G. N. Y. | 2        | .... | 44      | 25, <i>int. v. v.</i> |
| "             | $\frac{2662}{1}$ | "                 | <i>H. &amp; C.</i>                                 | Pal. N. Y.   | 8, pt. I | 288  | 13      | 25, "                 |
|               |                  |                   | " . . . . . Hall.                                  | St. G. N. Y. | 2        | .... | 44      | 26, "                 |
|               |                  |                   | <i>H. &amp; C.</i>                                 | Pal. N. Y.   | 8, pt. I | 288  | 13      | 26, "                 |
| Chem. Scho.   | $\frac{4658}{1}$ | Fig'd.            | <i>mucronata</i> ( <i>Con.</i> ) . . . Hall.       | Geol. N. Y.  | 4th D.   | 267  | ct. 120 | 5, 5a                 |
|               | $\frac{2822}{1}$ | Type.             | <i>parva</i> . . . . . Hall.                       | N. Y. S. M.  | 16       | 37   |         |                       |
|               |                  |                   | " . . . . . "                                      | Pal. N. Y.   | 4        | 85   | 11      | 11, <i>v. v.</i>      |
| U. H.         | $\frac{3041}{1}$ | "                 | <i>Patersoni</i> . . . . . Hall.                   | N. Y. S. M.  | 10       | 114  | ....    | 3, 4                  |
|               |                  |                   | " . . . . . "                                      | Pal. N. Y.   | 4        | 89   | 13      | 1, 2                  |
|               |                  |                   | " . . . . . "                                      | St. G. N. Y. | 2        | .... | 45      | 15, <i>v. v.</i>      |
| "             | $\frac{3041}{2}$ | "                 | " . . . . . Hall.                                  | " "          | 4        | 89   | 13      | 4, <i>int. v. v.</i>  |
| "             | $\frac{3041}{3}$ | Fig'd.            | " ? . . . . . "                                    | " "          | 4        | 89   | 12      | 9-11                  |
| Ham.          | $\frac{4659}{1}$ | Type.             | <i>plicata</i> . . . . . Hall.                     | N. Y. S. M.  | 13       | 90   |         |                       |
|               |                  |                   | " . . . . . "                                      | Pal. N. Y.   | 4        | 114  | 63      | 30-32                 |
| Orisk.        | $\frac{2664}{2}$ | "                 | <i>vascularia</i> . . . . . Hall.                  | " "          | 3        | 412  | 92      | 4, <i>int. v. v.</i>  |
| "             | $\frac{2664}{1}$ | Fig'd.            | " ? . . . . . "                                    | " "          | 3        | 412  | 93      | 2b, c                 |
|               |                  |                   | <b>Strophodonta</b> Hall . . . . .                 |              |          |      |         |                       |
|               |                  |                   | <i>ampla</i> . . . . .                             |              |          |      |         |                       |
|               |                  |                   | <i>arcuata</i> . . . . .                           |              |          |      |         |                       |
|               |                  |                   | <i>cayuta</i> . . . . .                            |              |          |      |         |                       |
|               |                  |                   | <i>cæolata</i> . . . . .                           |              |          |      |         |                       |
|               |                  |                   | <i>fragilis</i> . . . . .                          |              |          |      |         |                       |
|               |                  |                   | <i>intermedia</i> . . . . .                        |              |          |      |         |                       |
|               |                  |                   | <i>magnifica</i> . . . . .                         |              |          |      |         |                       |
|               |                  |                   | <i>nacrea</i> . . . . .                            |              |          |      |         |                       |
|               |                  |                   | <i>perplana</i> . . . . .                          |              |          |      |         |                       |
|               |                  |                   | " <i>var. nervosa</i> . . . . .                    |              |          |      |         |                       |
|               |                  |                   | <b>Strophomena</b> Raf. ( <i>Blainv.</i> )         |              |          |      |         |                       |
|               |                  |                   | <i>acutiradiata</i> . . . . .                      |              |          |      |         |                       |
|               |                  |                   | <i>ampla</i> . . . . .                             |              |          |      |         |                       |
|               |                  |                   | <i>arctostriata</i> . . . . .                      |              |          |      |         |                       |
|               |                  |                   | <i>bifurcata</i> . . . . .                         |              |          |      |         |                       |
|               |                  |                   | <i>concava</i> . . . . .                           |              |          |      |         |                       |
|               |                  |                   | <i>depressa</i> , <i>var. ventricosa</i> . . . . . |              |          |      |         |                       |
|               |                  |                   | <i>fragilis</i> . . . . .                          |              |          |      |         |                       |
|               |                  |                   | <i>hemispherica</i> . . . . .                      |              |          |      |         |                       |
|               |                  |                   | <i>inæquiradiata</i> . . . . .                     |              |          |      |         |                       |
|               |                  |                   | <i>inæquistriata</i> . . . . .                     |              |          |      |         |                       |
|               |                  |                   | <i>interstitialis</i> Hall . . . . .               |              |          |      |         |                       |
|               |                  |                   | <i>junia</i> . . . . .                             |              |          |      |         |                       |
|               |                  |                   | <i>Lincklæni</i> . . . . .                         |              |          |      |         |                       |





Class BRACHIOPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                 | REFERENCE.   |          |     |     |                 |
|------------------|------------------|----------------------|--------------------------------------------|--------------|----------|-----|-----|-----------------|
|                  |                  |                      |                                            | Work.        | Vol.     | P.  | Pl. | Figs.           |
|                  |                  |                      | <b>Strophomena</b> Raf.(Bl.)— <i>Con.</i>  |              |          |     |     |                 |
|                  |                  |                      | <i>magnifica</i> .....                     |              |          |     |     |                 |
|                  |                  |                      | <i>magniventra</i> .....                   |              |          |     |     |                 |
|                  |                  |                      | <i>mucronata</i> .....                     |              |          |     |     |                 |
|                  |                  |                      | <i>nacrea</i> .....                        |              |          |     |     |                 |
|                  |                  |                      | <i>nervosa</i> .....                       |              |          |     |     |                 |
|                  |                  |                      | <i>Patersoni</i> .....                     |              |          |     |     |                 |
|                  |                  |                      | <i>pectinacea</i> .....                    |              |          |     |     |                 |
|                  |                  |                      | <i>pustulosa</i> H. (non Phillips)         |              |          |     |     |                 |
|                  |                  |                      | <i>rhomboidalis</i> .....                  |              |          |     |     |                 |
|                  |                  |                      | <i>rugosa</i> , var. <i>ventricosa</i> ... |              |          |     |     |                 |
|                  |                  |                      | <i>setigera</i> .....                      |              |          |     |     |                 |
|                  |                  |                      | <i>textilis</i> .....                      |              |          |     |     |                 |
|                  |                  |                      | <b>Strophonella</b> Hall.                  |              |          |     |     |                 |
| U. H.            | $\frac{2820}{6}$ | Type.                | <i>ampla</i> .....Hall.                    | N. Y. S. M.  | 10       | III |     |                 |
|                  |                  |                      | "                                          | Pal. N. Y.   | 4        | 93  | 14  | 1a, b           |
| "                | $\frac{2820}{5}$ | "                    | "                                          | "            | 4        | 93  | 14  | 1c, d           |
| Scho.            | $\frac{2820}{1}$ | "                    | "                                          | "            | 4        | 93  | 14  | 1i, int. vi. v. |
|                  |                  |                      | "                                          | St. G. N. Y. | 2        |     | 43  | 13,             |
|                  |                  |                      | H. & C.                                    | Pal. N. Y.   | 8, pt. 1 | 293 | 12  | 13,             |
| Chem.            | $\frac{4660}{1}$ | "                    | <i>cælata</i> .....Hall.                   | "            | 4        | 112 | 19  | 6,              |
|                  |                  |                      | "                                          | St. G. N. Y. | 2        |     | 43  | 21,             |
|                  |                  |                      | H. & C.                                    | Pal. N. Y.   | 8, pt. 1 | 293 | 12  | 21,             |
|                  |                  |                      | <b>Terebratula</b> Lhwyl.                  |              |          |     |     |                 |
|                  |                  |                      | <i>elia</i> .....                          |              |          |     |     |                 |
|                  |                  |                      | <i>harmonia</i> .....                      |              |          |     |     |                 |
|                  |                  |                      | <i>jucunda</i> .....                       |              |          |     |     |                 |
|                  |                  |                      | <i>lens</i> .....                          |              |          |     |     |                 |
|                  |                  |                      | <i>Lincklæni</i> .....                     |              |          |     |     |                 |
|                  |                  |                      | " var.....                                 |              |          |     |     |                 |
|                  |                  |                      | <i>navicella</i> .....                     |              |          |     |     |                 |
|                  |                  |                      | <i>planirostra</i> .....                   |              |          |     |     |                 |
|                  |                  |                      | <i>rectirostra</i> .....                   |              |          |     |     |                 |
|                  |                  |                      | <i>Romingeri</i> .....                     |              |          |     |     |                 |
|                  |                  |                      | <i>simulator</i> .....                     |              |          |     |     |                 |
|                  |                  |                      | <b>Trematospira</b> Hall.                  |              |          |     |     |                 |
| Ham.             | $\frac{4661}{1}$ | Type.                | <i>gibbosa</i> .....Hall.                  | N. Y. S. M.  | 13       | 82  |     |                 |
|                  |                  |                      | "                                          | Pal. N. Y.   | 4        | 272 | 45  | 7-14            |
|                  |                  |                      | H. & C.                                    | "            | 8, pt. 2 | 127 | 49  | 23-27           |
| "                | "                | "                    | "                                          | "            | 4        | 272 | 45  | 15, int.        |
|                  |                  |                      | <i>hirsuta</i> .....                       |              |          |     |     |                 |
|                  |                  |                      | <i>nobilis</i> .....                       |              |          |     |     |                 |
|                  |                  |                      | <b>Trigeria</b> Bayle (H. & C.).           |              |          |     |     |                 |
| Ham.             | $\frac{4662}{1}$ | Type.                | <i>lepidæa</i> .....Hall.                  | N. Y. S. M.  | 13       | 83  |     |                 |
|                  |                  |                      | "                                          | Pal. N. Y.   | 4        | 276 | 45  | 2-4, 6          |
|                  |                  |                      | H. & C.                                    | "            | 8, pt. 2 | 274 | 50  | 36-38, 40       |
|                  |                  |                      | Hall.                                      | "            | 2        |     | 56  | 3e, f           |
| "                | "                | "                    | "                                          | "            | 4        | 276 | 45  | 5, d. v. X 2    |
|                  |                  |                      | H. & C.                                    | "            | 8, pt. 2 | 274 | 50  | 39,             |
|                  |                  |                      | <b>Vitulina</b> Hall.                      |              |          |     |     |                 |
| Ham.             | $\frac{4663}{1}$ | Gen. and<br>Sp. Type | <i>pustulosa</i> .....Hall.                | N. Y. S. M.  | 13       | 82  |     |                 |
|                  |                  |                      | "                                          | Pal. N. Y.   | 4        | 410 | 62  | 1a, b           |
|                  |                  |                      | H. & C.                                    | "            | 8, pt. 2 | 138 | 82  | 8, 9            |



| LOCALITY.              | REMARKS.                                                                                             |
|------------------------|------------------------------------------------------------------------------------------------------|
| .....                  | See <i>Leptostrophia magnifica</i> .                                                                 |
| .....                  | " <i>Stropheodonta magniventer</i> .                                                                 |
| .....                  | " <i>Chonetes mucronatus</i> .                                                                       |
| .....                  | " <i>Pholidostrophia nacrea</i> .                                                                    |
| .....                  | " <i>Leptostrophia perplana</i> , var. <i>nervosa</i> .                                              |
| .....                  | " <i>Stropheodonta Patersoni</i> .                                                                   |
| .....                  | " <i>Orthothetes chemungensis</i> .                                                                  |
| .....                  | " <i>Strophalosia truncata</i> .                                                                     |
| .....                  | " <i>Leptæna rhomboidalis</i> .                                                                      |
| .....                  | " " " var. <i>ventricosa</i> .                                                                       |
| .....                  | " <i>Chonetes setiger</i> .                                                                          |
| .....                  | " <i>Leptostrophia junia</i> .                                                                       |
| .....                  | As <i>Strophomena</i> ( <i>Strophodonta</i> ) <i>ampla</i> .                                         |
| Schoharie, N. Y.       | " <i>Strophodonta ampla</i> . A small dorsal valve, imbedded, and the internal cast of a larger one. |
| Stafford, N. Y.        | As <i>Strophodonta ampla</i> . A nearly entire individual.                                           |
| .....                  | " " "                                                                                                |
| Near Clarksville, N.Y. | Internal imprint of large ventral valve.                                                             |
| .....                  | As <i>Strophodonta cælata</i> .                                                                      |
| Near Blossburg, Pa.    | Very perfect internal imprint of a ventral valve in fine sandstone.                                  |
| .....                  | See <i>Cryptonella elia</i> .                                                                        |
| .....                  | " <i>Eunella harmonia</i> .                                                                          |
| .....                  | " <i>Cryptonella jucunda</i> .                                                                       |
| .....                  | " " <i>lens</i> .                                                                                    |
| .....                  | " <i>Eunella Lincklæni</i> .                                                                         |
| .....                  | " " " var.                                                                                           |
| .....                  | " <i>Cryptonella navicella</i> .                                                                     |
| .....                  | " " <i>planirostra</i> .                                                                             |
| .....                  | " " <i>rectirostra</i> .                                                                             |
| .....                  | " <i>Cranæna Romingeri</i> .                                                                         |
| .....                  | " <i>Eunella simulator</i> .                                                                         |
| Canandaigua L., N.Y.   | Four entire individuals.                                                                             |
| " "                    | A dorsal valve.                                                                                      |
| .....                  | See <i>Parazyga hirsuta</i> .                                                                        |
| .....                  | " <i>Cyclorhina nobilis</i> .                                                                        |
| .....                  | As <i>Rhynchospira lepida</i> .                                                                      |
| .....                  | " " "                                                                                                |
| Canandaigua L., N.Y.   | " <i>Atrypa camura</i> Hall. Entire individual.                                                      |
| .....                  | " <i>Rhynchospira lepida</i> .                                                                       |
| Canandaigua L., N.Y.   | Entire individual. The characters about the beak were completed from another specimen.               |
| Onondaga Co., N. Y.    | Two opposite valves, imbedded together. From "Tinker's Falls."                                       |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.      | REFERENCE.   |          |     |       |                    |
|---------------|------------------|-------------------|---------------------------------|--------------|----------|-----|-------|--------------------|
|               |                  |                   |                                 | Work.        | Vol.     | P.  | Pl.   | Figs.              |
| Ham.          | $\frac{4663}{2}$ | Gen. and Sp Type. | <b>Vitulina</b> Hall—Continued. |              |          |     |       |                    |
|               |                  |                   | pustulosa.....Hall.             | N. Y. S. M.  | 13       | 82  | p. 72 | 1, <i>d. v.</i>    |
|               |                  |                   | “ “ “ “ “ “                     | Pal. N. Y.   | 4        | 410 | 62    | 1c-f               |
|               |                  |                   | H. & C.                         | St. G. N. Y. | 13       | 805 | 39    | 28-31, 36          |
|               |                  |                   | “ “ “ “ “ “                     | Pal. N. Y.   | 8, pt. 2 | 138 | 82    | 14-16, 19, 25      |
| “             | $\frac{4663}{3}$ | “                 | “ .....Hall.                    | N. Y. S. M.  | 13       | 82  | p. 72 | 2, <i>int.</i> × 2 |
|               |                  |                   | “ “ “ “ “ “                     | Pal. N. Y.   | 4        | 410 | 62    | 1h, i              |
|               |                  |                   | H. & C.                         | St. G. N. Y. | 13       | 805 | 39    | 32, 33             |
|               |                  |                   | “ “ “ “ “ “                     | Pal. N. Y.   | 8, pt. 2 | 138 | 82    | 17, 21             |

Kingdom MOLLUSCA.

|           |                  |                     |                                |             |                   |      |       |                |
|-----------|------------------|---------------------|--------------------------------|-------------|-------------------|------|-------|----------------|
|           |                  |                     | <b>Actinodesma</b> Sandberger. |             |                   |      |       |                |
|           |                  |                     | <i>subrectum</i> .....         |             |                   |      |       |                |
|           |                  |                     | <b>Actinopteria</b> Hall.      |             |                   |      |       |                |
| Ham.      | $\frac{4664}{1}$ | Fig'd.              | Boydii (Conrad)....Hall.       | Pal. N. Y.  | 5, pt. I          | 113  | 19    | 2, 5, 14       |
| “         | $\frac{4664}{2}$ | “                   | “ “ “ “ “ “                    | “ “         | 5, pt. I          | 113  | 19    | 3, 6           |
| “         | $\frac{4664}{3}$ | “                   | “ “ “ “ “ “                    | “ “         | 5, pt. I          | 113  | 19    | 4              |
| “         | $\frac{4664}{1}$ | “                   | “ “ “ “ “ “                    | “ “         | 5, pt. I          | 113  | 19    | 8, 15          |
| “         | $\frac{4664}{4}$ | “                   | “ “ “ “ “ “                    | “ “         | 5, pt. I          | 113  | 19    | 9, 16, 17      |
| “         | $\frac{4664}{5}$ | “                   | “ “ “ “ “ “                    | “ “         | 5, pt. I          | 113  | 19    | 21             |
| “         | “                | “                   | “ “ “ “ “ “                    | “ “         | 5, pt. I          | 113  | 19    | 24, 30         |
| “         | “                | “                   | “ “ “ “ “ “                    | “ “         | 5, pt. I          | 113  | 19    | 26, 28, 29     |
|           |                  |                     |                                |             |                   |      | 84    | 16             |
| “         | $\frac{4665}{1}$ | Type.               | decussata.....Hall.            | Geol. N. Y. | 4th D.            | 203  | ct.82 | I              |
|           |                  |                     | (H.) Miller.                   | Am. P. F.   | .....             | 202  | ..... | .....          |
|           |                  |                     | Hall.                          | N. Y. S. M. | 35                | 300  |       |                |
|           |                  |                     | “ “ “ “ “ “                    | Pal. N. Y.  | 5, pt. I          | 111  | 18    | I              |
| “         | $\frac{4665}{2}$ | “                   | “ ..... “                      | Geol. N. Y. | 4th D.            | 203  | ct.82 | 2              |
|           |                  |                     | (H.) Miller.                   | Am. P. F.   | .....             | 202  | ..... | .....          |
|           |                  |                     | Hall.                          | Pal. N. Y.  | 5, pt. I          | 111  | 18    | 10             |
| “         | “                | “                   | “ “ “ “ “ “                    | “ “         | 5, pt. I          | 111  | 18    | 7              |
| “         | $\frac{4665}{1}$ | “                   | “ “ “ “ “ “                    | “ “         | 5, pt. I          | 111  | 18    | 8, 12          |
| “         | $\frac{4665}{3}$ | “                   | “ “ “ “ “ “                    | “ “         | 5, pt. I          | 111  | 18    | 13, 14         |
|           |                  |                     |                                |             |                   |      | 84    | 4, <i>enl.</i> |
| “         | $\frac{4665}{4}$ | “                   | “ “ “ “ “ “                    | “ “         | 5, pt. I          | 111  | 20    | 19             |
| Mar.      | $\frac{4393}{1}$ | “                   | doris.....Hall.                | N. Y. S. M. | 35                | 298  |       |                |
|           |                  |                     | “ “ “ “ “ “                    | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | .... | 17    | 4              |
|           |                  |                     | “ “ “ “ “ “                    | “ “         | 5, pt. I          | 109  | 17    | 4              |
| Chem.     | $\frac{4666}{1}$ | Fig'd.              | epsilon?.....Hall.             | “ “         | 5, pt. 1, Pl.&Ex. | .... | 23    | 5, 6           |
|           |                  |                     | “ “ “ “ “ “                    | “ “         | 5, pt. I          | 122  | 23    | 5, 6           |
|           |                  |                     | <i>leander</i> .....           |             |                   |      |       |                |
| Ham.      | $\frac{4667}{1}$ | Fig'd.              | perobliqua (Con.)...Hall.      | Pal. N. Y.  | 5, pt. I          | 116  | 19    | 31             |
|           |                  |                     |                                |             |                   |      | 84    | 14             |
| “         | $\frac{4668}{1}$ | Type.               | subdecussata (H.) Miller.      | Am. P. F.   | .....             | 202  | ..... | .....          |
|           |                  |                     | Hall.                          | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | .... | 19    | 25             |
|           |                  |                     | “ “ “ “ “ “                    | N. Y. S. M. | 35                | 298  |       |                |
|           |                  |                     | “ “ “ “ “ “                    | Pal. N. Y.  | 5, pt. I          | 110  | 19    | 25             |
|           |                  |                     | <b>Amnigenia</b> Hall.         |             |                   |      |       |                |
| One-onta. | $\frac{4669}{1}$ | Fig'd Sp. and G. T. | catskillensis (Vanux.) H.      | Pal. N. Y.  | 5, pt. I          | 516  | 40    | 1-4            |



| LOCALITY.             | REMARKS.                                                            |
|-----------------------|---------------------------------------------------------------------|
| Canandaigua L., N. Y. | A very perfect individual. Figures are enlargements to 3 diameters. |
| Darien, N. Y.         | A ventral valve of medium size and the internal cast of another.    |

Class LAMELLIBRANCHIATA.

|                                            |                                                                                                                                                    |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                                      | See <i>Glyptodesma subrectum</i> .                                                                                                                 |
| Jefferson, N. Y.                           | Casts of two left valves and one right.*                                                                                                           |
| Fultonham, N. Y.                           | An exfoliated left valve and the cast of a right.                                                                                                  |
| ?                                          | Cast of left valve.                                                                                                                                |
| Jefferson, N. Y.                           | Casts of two opposite valves in block with <i>Nuculites cuneiformis</i> ,<br>fig. 16, pl. 47, and <i>Leda brevirostris</i> , figs. 38, 39, pl. 47. |
| Schoharie Co., N. Y.                       | Casts of three left valves.                                                                                                                        |
| Cazenovia, N. Y.                           | Exterior imprint of a right valve.                                                                                                                 |
| “ “                                        | Casts of two individuals together and of a right valve.                                                                                            |
| “ “                                        | Nearly entire cast of an individual.                                                                                                               |
| .....                                      | See also <i>Actinopteria epsilon</i> .                                                                                                             |
| .....                                      | As <i>Avicula decussata</i> .                                                                                                                      |
| .....                                      | “ <i>Pteronites decussata</i> .                                                                                                                    |
| 18 Mile Creek, N. Y.                       | Large right valve, much exfoliated, imbedded. From the lake shore.                                                                                 |
| .....                                      | As <i>Avicula decussata</i> .                                                                                                                      |
| .....                                      | “ <i>Pteronites decussata</i> .                                                                                                                    |
| York, N. Y.                                | Cast of left valve.                                                                                                                                |
| “ “                                        | Cast of left valve retaining a very little of the shell substance.                                                                                 |
| 18 Mile Creek, N. Y.                       | Cast of left valve and a large left valve preserving much of shell.                                                                                |
| Canandaigua L. or<br>Genesee Valley, N. Y. | A well-preserved left valve, imbedded.                                                                                                             |
| Madison Co., N. Y.                         | Internal cast of right valve.                                                                                                                      |
| .....                                      | As type of <i>Actinopteria leander</i> Hall.                                                                                                       |
| E. Bloomfield, N. Y.                       | Exterior-interior impr. left valve. Figure is not an enlargement.                                                                                  |
| .....                                      | As <i>Actinopteria Boydi</i> .                                                                                                                     |
| Ithaca, N. Y.                              | Casts of two left valves “referred to this species with some doubt.”                                                                               |
| .....                                      | See <i>Actinopteria doris</i> .                                                                                                                    |
| Cazenovia, N. Y.                           | Nearly entire cast of individual.                                                                                                                  |
| .....                                      | As <i>Pteronites subdecussata</i> , nomen nudum.                                                                                                   |
| Cazenovia, N. Y.                           | Cast of left valve.                                                                                                                                |
| Nr. Mt. Upton, N. Y.                       | Three casts. Last two figures are from one specimen. Locality is<br>in Chenango county.                                                            |

\* The lamellibranchs of the New York Hamilton and Chemung strata are preserved for the most part as casts or moulds, many of which show both external and internal features of the shell with greater or less distinctness. The shell substance has almost always entirely disappeared. Here, as elsewhere in this Catalogue, the term “cast” is uniformly used for the convex specimen and “imprint” for the concave or matrix specimen.

## Class LAMELLIBRANCHIATA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.       | REFERENCE.  |                        |       |         |               |
|------------------|------------------|----------------------|----------------------------------|-------------|------------------------|-------|---------|---------------|
|                  |                  |                      |                                  | Work.       | Vol.                   | P.    | Pl.     | Figs.         |
|                  |                  |                      | <b>Astarte</b> Sowerby.          |             |                        |       |         |               |
|                  |                  |                      | <i>subtextilis</i> .....         | .....       | .....                  | ..... | .....   | .....         |
|                  |                  |                      | <b>Avicula</b> Klein.            |             |                        |       |         |               |
|                  |                  |                      | <i>acanthoptera</i> .....        | .....       | .....                  | ..... | .....   | .....         |
|                  |                  |                      | <i>decussata</i> .....           | .....       | .....                  | ..... | .....   | .....         |
|                  |                  |                      | <i>lævis</i> .....               | .....       | .....                  | ..... | .....   | .....         |
|                  |                  |                      | <i>longispina</i> .....          | .....       | .....                  | ..... | .....   | .....         |
|                  |                  |                      | <i>orbiculata</i> .....          | .....       | .....                  | ..... | .....   | .....         |
|                  |                  |                      | <i>pecteniformis</i> Conrad..... | .....       | .....                  | ..... | .....   | .....         |
|                  |                  |                      | “ Hall.....                      | .....       | .....                  | ..... | .....   | .....         |
|                  |                  |                      | <i>recticosta</i> .....          | .....       | .....                  | ..... | .....   | .....         |
|                  |                  |                      | <i>signata</i> .....             | .....       | .....                  | ..... | .....   | .....         |
|                  |                  |                      | <b>Aviculopecten</b> McCoy.      |             |                        |       |         |               |
| Ham.             | $\frac{4670}{1}$ | Fig'd.               | <i>bellus</i> (Conrad) ... Hall. | Pal. N. Y.  | 5, pt. I               | 35    | 2       | 5, 6          |
| Chem.            | $\frac{4671}{1}$ | Type.                | <i>cancellatus</i> ..... Hall.   | Geol. N. Y. | 4th D.                 | 265   | ct. 119 | 4             |
|                  |                  |                      | “ d' Orb.                        | Pr. d. Pal. | I                      | 87    | .....   | .....         |
|                  |                  |                      | “ Hall.                          | Pal. N. Y.  | 5, pt. 1,<br>Pl. & Ex. | ..... | 7       | 12            |
|                  |                  |                      | “                                | N. Y. S. M. | 35                     | 229   | .....   | .....         |
|                  |                  |                      | “                                | Pal. N. Y.  | 5, pt. I               | 18    | 7       | 12            |
| “                | $\frac{4671}{2}$ | “                    | “ .....                          | “           | 5, pt. 1,<br>Pl. & Ex. | ..... | 7       | 16            |
|                  |                  |                      | “                                | “           | 5, pt. I               | 18    | 7       | 16            |
| “                | $\frac{4671}{3}$ | “                    | “ .....                          | “           | 5, pt. 1,<br>Pl. & Ex. | ..... | 7       | 18, 19        |
|                  |                  |                      | “                                | “           | 5, pt. I               | 18    | 7       | 18, 19        |
| “                | $\frac{4672}{1}$ | “                    | <i>convexus</i> ..... Hall.      | Geol. N. Y. | 4th D.                 | 265   | ct. 119 | 6             |
|                  |                  |                      | “                                | Pal. N. Y.  | 5, pt. 1,<br>Pl. & Ex. | ..... | 7       | 22, 23        |
|                  |                  |                      | “                                | N. Y. S. M. | 35                     | 236   | .....   | .....         |
|                  |                  |                      | “                                | Pal. N. Y.  | 5, pt. I               | 28    | 7       | 22, 23        |
| “                | $\frac{4673}{1}$ | “                    | <i>dolabriformis</i> ..... Hall. | Geol. N. Y. | 4th D.                 | 265   | ct. 119 | 9             |
|                  |                  |                      | “                                | Pal. N. Y.  | 5, pt. 1,<br>Pl. & Ex. | ..... | 7       | 21            |
|                  |                  |                      | “                                | N. Y. S. M. | 35                     | 235   | .....   | .....         |
|                  |                  |                      | “                                | Pal. N. Y.  | 5, pt. I               | 26    | 7       | 21            |
| “                | $\frac{4674}{1}$ | “                    | <i>duplicatus</i> ..... Hall.    | Geol. N. Y. | 4th D.                 | 264   | ct. 119 | 2             |
|                  |                  |                      | “                                | Pal. N. Y.  | 5, pt. 1,<br>Pl. & Ex. | ..... | 7       | 2             |
|                  |                  |                      | “                                | N. Y. S. M. | 35                     | 228   | .....   | .....         |
|                  |                  |                      | “                                | Pal. N. Y.  | 5, pt. I               | 17    | 7       | 2             |
| “                | $\frac{4674}{2}$ | “                    | “ .....                          | “           | 5, pt. I               | 17    | 7       | 1             |
| “                | $\frac{4674}{3}$ | “                    | “ .....                          | “           | 5, pt. I               | 17    | 7       | 3, 4          |
|                  |                  |                      | “ .....                          | “           | 5, pt. I               | 17    | 7       | 5, 7          |
| Ham.             | $\frac{4675}{1}$ | “                    | <i>exactus</i> ..... Hall.       | “           | 5, pt. 1,<br>Pl. & Ex. | ..... | 3       | 21            |
|                  |                  |                      | “                                | N. Y. S. M. | 35                     | 221   | .....   | .....         |
|                  |                  |                      | “                                | Pal. N. Y.  | 5, pt. I               | 8     | 3       | 21            |
| “                | $\frac{4676}{1}$ | “                    | <i>fasciculatus</i> ..... Hall.  | “           | 5, pt. 1,<br>Pl. & Ex. | ..... | 5       | 9, 10, 12, 16 |
|                  |                  |                      | “                                | N. Y. S. M. | 35                     | 224   | .....   | .....         |
|                  |                  |                      | “                                | Pal. N. Y.  | 5, pt. I               | 11    | 5       | 9, 10, 12, 16 |
| “                | $\frac{4676}{2}$ | “                    | “ .....                          | “           | 5, pt. 1,<br>Pl. & Ex. | ..... | 5       | 15            |
|                  |                  |                      | “                                | N. Y. S. M. | 35                     | 224   | .....   | .....         |
|                  |                  |                      | “                                | Pal. N. Y.  | 5, pt. I               | 11    | 5       | 15            |
| “                | $\frac{4676}{3}$ | “                    | “ .....                          | “           | 5, pt. I               | 11    | 5       | 17            |
| “                | $\frac{4677}{1}$ | “                    | <i>formio</i> ..... Hall.        | “           | 5, pt. 1,<br>Pl. & Ex. | ..... | 5       | 20            |
|                  |                  |                      | “                                | N. Y. S. M. | 35                     | 222   | .....   | .....         |
|                  |                  |                      | “                                | Pal. N. Y.  | 5, pt. I               | 9     | 5       | 20            |



| LOCALITY.                               | REMARKS.                                                                                                               |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| .....                                   | See <i>Euthydesma subtextile</i> .                                                                                     |
| .....                                   | See <i>Leptodesma acanthopterum</i> .                                                                                  |
| .....                                   | “ <i>Actinopteria decussata</i> .                                                                                      |
| .....                                   | “ <i>Leiopteria lævis</i> .                                                                                            |
| .....                                   | “ <i>Leptodesma longispina</i> .                                                                                       |
| .....                                   | “ <i>Lyriopecten orbiculatus</i> .                                                                                     |
| .....                                   | “ <i>Aviculopecten pectiniformis</i> .                                                                                 |
| .....                                   | “ <i>Pterinea chemungensis</i> .                                                                                       |
| .....                                   | “ <i>Aviculopecten recticosta</i> .                                                                                    |
| .....                                   | “ “ <i>signatus</i> .                                                                                                  |
| Cayuga Lake, N. Y.                      | Casts of two small left valves from near Norton's Landing.                                                             |
| .....                                   | As <i>Pecten cancellatus</i> .                                                                                         |
| .....                                   | As “ <i>Halleanus</i> , Hall's name being preoccupied.                                                                 |
| .....                                   | As type of <i>Aviculopecten subcancellatus</i> .                                                                       |
| .....                                   | Referred back to old specific name.                                                                                    |
| Belmont, N. Y.                          | Very sharp cast of right valve.                                                                                        |
| .....                                   | As type of <i>Aviculopecten subcancellatus</i> .                                                                       |
| 5 miles W. S. W. of<br>Westfield, N. Y. | Weathered cast of right valve.                                                                                         |
| .....                                   | As type of <i>Aviculopecten subcancellatus</i> .                                                                       |
| Rockville, N. Y.                        | Cast of small left valve.                                                                                              |
| .....                                   | As <i>Pecten ? convexus</i> .                                                                                          |
| .....                                   | Referred to present species.                                                                                           |
| Rockville, N. Y.                        | Cast of left valve.                                                                                                    |
| .....                                   | As <i>Pecten ? dolabriformis</i> .                                                                                     |
| .....                                   | Referred to present species.                                                                                           |
| Belmont, N. Y.                          | Cast of right valve. Figure is an enlargement to two diams.                                                            |
| .....                                   | As <i>Pecten duplicatus</i> .                                                                                          |
| .....                                   | Referred to present species.                                                                                           |
| Belmont, N. Y.                          | Cast of left valve.                                                                                                    |
| Hobbierville, N. Y.                     | Cast of right valve. Allegany county.                                                                                  |
| Rockville, N. Y.                        | Cast of right valve and sharp external imprint of left valve, the<br>latter used for the enlargement. Allegany county. |
| Belmont, N. Y.                          | Casts of two left valves.                                                                                              |
| Madison Co., N. Y.                      | Cast of left valve.                                                                                                    |
| Fultonham, N. Y.                        | External imprints of three left valves and cast of right.                                                              |
| .....                                   | As type of <i>Aviculopecten repletus</i> . Hall.                                                                       |
| .....                                   | Referred to present species.                                                                                           |
| Jeffersonville, N. Y.                   | Cast of left valve.                                                                                                    |
| Cazenovia, N. Y.                        | Cast of left valve.                                                                                                    |
| Fultonham, N. Y.                        | Imperfect cast of left valve.                                                                                          |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.      | REFERENCE.  |                   |                   |        |          |
|---------------|------------------|-------------------|---------------------------------|-------------|-------------------|-------------------|--------|----------|
|               |                  |                   |                                 | Work.       | Vol.              | P.                | Pl.    | Figs.    |
|               |                  |                   | <b>Aviculopecten McCoy-Con.</b> |             |                   |                   |        |          |
| Ham.          | $\frac{4677}{2}$ | Type.             | formio.....Hall.                | Pal. N. Y.  | 5, pt. I          | 9                 | 5      | 21       |
| U. H.         | $\frac{4205}{1}$ | "                 | ignotus.....Hall.               | " "         | 5, pt. I, Pl.&Ex. | ....              | I      | 2        |
|               |                  |                   | "                               | N. Y. S. M. | 35                | 240               |        |          |
|               |                  |                   | "                               | Pal. N. Y.  | 5, pt. I          | 33                | I      | 2        |
| Ham.          | $\frac{4678}{1}$ | "                 | lautus.....Hall.                | " "         | 5, pt. I, Pl.&Ex. | ....              | 3      | 17       |
|               |                  |                   | "                               | N. Y. S. M. | 35                | 226               |        |          |
|               |                  |                   | "                               | Pal. N. Y.  | 5, pt. I          | 14                | 3      | 17       |
|               |                  |                   |                                 |             |                   |                   | 81     | 5        |
| U. H.         | $\frac{4206}{1}$ | "                 | pectiniformis ....Conrad.       | J. A. N. S. | 8                 | 240               | 12     | 14       |
|               |                  |                   | "                               | Hall.       | Pal. N. Y.        | 5, pt. I, Pl.&Ex. | ....   | I        |
|               |                  |                   | "                               | N. Y. S. M. | 35                | 219               |        | 9        |
|               |                  |                   | "                               | Pal. N. Y.  | 5, pt. I          | 4                 | I      | 9        |
| Ham.          | $\frac{4679}{1}$ | "                 | phorcus.....Hall.               | " "         | 5, pt. I, Pl.&Ex. | ....              | 5      | 22       |
|               |                  |                   | "                               | N. Y. S. M. | 35                | 223               |        |          |
|               |                  |                   | "                               | Pal. N. Y.  | 5, pt. I          | 10                | 5      | 22       |
| U. H.         | $\frac{3088}{3}$ | Fig'd.            | princeps (Conrad) ..Hall.       | " "         | 5, pt. I, Pl.&Ex. | ....              | I      | 10       |
|               |                  |                   | "                               | N. Y. S. M. | 35                | 217               | ....   | ....     |
|               |                  |                   | "                               | Pal. N. Y.  | 5, pt. I          | I                 | I      | 10       |
| Ham.          | $\frac{3088}{4}$ | "                 | " " " "                         | " "         | 5, pt. I          | I                 | 5      | 23       |
| "             | $\frac{3088}{5}$ | "                 | " " " "                         | " "         | 5, pt. I          | I                 | 5      | 24       |
| "             | $\frac{3088}{6}$ | "                 | " " " "                         | " "         | 5, pt. I          | I                 | 6      | 4-6      |
| "             | $\frac{3088}{7}$ | "                 | " " " "                         | " "         | 5, pt. I          | I                 | 6      | 7        |
| Orisk.        | $\frac{2689}{1}$ | Type.             | recticosta.....Hall.            | " "         | 3                 | 466               | 109    | 3        |
|               |                  |                   | repletus .....                  |             |                   |                   |        |          |
| Chem.         | $\frac{4680}{1}$ | Type.             | rugistriatus.....Hall.          | Geol. N. Y. | 4th D.            | 264               | ct.119 | 3        |
|               |                  |                   | "                               | Pal. N. Y.  | 5, pt. I, Pl.&Ex. | ....              | 7      | 9, 10    |
|               |                  |                   | "                               | N. Y. S. M. | 35                | 227               |        |          |
|               |                  |                   | "                               | Pal. N. Y.  | 5, pt. I          | 15                | 7      | 9, 10    |
| "             | $\frac{4680}{2}$ | "                 | " " " "                         | " "         | 5, pt. I          | 15                | 7      | 8        |
| "             | $\frac{4680}{1}$ | "                 | " " " "                         | " "         | 5, pt. I          | 15                | 7      | 11       |
|               |                  |                   | sanduskyensis.....              |             |                   |                   |        |          |
| Ham.          | $\frac{4681}{1}$ | Type.             | scabridus.....Hall.             | Pal. N. Y.  | 5, pt. I, Pl.&Ex. | ....              | 3      | 5        |
|               |                  |                   | "                               | N. Y. S. M. | 35                | 220               |        |          |
|               |                  |                   | "                               | Pal. N. Y.  | 5, pt. I          | 7                 | 3      | 5        |
| "             | $\frac{4681}{2}$ | "                 | " " " "                         | " "         | 5, pt. I          | 7                 | 3      | 12, enl. |
| Chem.         | $\frac{4682}{1}$ | "                 | signatus.....Hall.              | Geol. N. Y. | 4th D.            | 265               | ct.119 | 5        |
|               |                  |                   | "                               | Pal. N. Y.  | 5, pt. I, Pl.&Ex. | ....              | 7      | 24       |
|               |                  |                   | "                               | N. Y. S. M. | 35                | 237               |        |          |
|               |                  |                   | "                               | Pal. N. Y.  | 5, pt. I          | 29                | 7      | 24       |
| "             | $\frac{4683}{1}$ | "                 | squama.....Hall.                | " "         | 5, pt. I, Pl.&Ex. | ....              | 7      | 20       |
|               |                  |                   | "                               | N. Y. S. M. | 35                | 235               |        |          |
|               |                  |                   | "                               | Pal. N. Y.  | 5, pt. I          | 27                | 7      | 20       |
| "             | $\frac{4684}{1}$ | "                 | striatus.....Hall.              | Geol. N. Y. | 4th D.            | 265               | ct.119 | 7        |
|               |                  |                   | "                               | Pal. N. Y.  | 5, pt. I, Pl.&Ex. | ....              | 10     | 3, 4     |
|               |                  |                   | "                               | N. Y. S. M. | 35                | 232               |        |          |
|               |                  |                   | "                               | Pal. N. Y.  | 5, pt. I          | 22                | 10     | 3, 4     |
|               |                  |                   | subcancellatus .....            |             |                   |                   |        |          |
|               |                  |                   | (Pterinopecten ?)               |             |                   |                   |        |          |
| U. H.         | $\frac{4007}{1}$ | Type.             | terminalis.....Hall.            | Pal. N. Y.  | 5, pt. I, Pl.&Ex. | ....              | I      | 3        |
|               |                  |                   | "                               | N. Y. S. M. | 35                | 239               |        |          |
|               |                  |                   | "                               | Pal. N. Y.  | 5, pt. I          | 32                | I      | 3        |
|               |                  |                   | undulatus H.(non McCoy)         |             |                   |                   |        |          |



| LOCALITY.                                                                                                  | REMARKS.                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Near Hamilton, N. Y.                                                                                       | Cast of a pair of expanded valves.                                                                                                                                                                                     |
| Near Victor, N. Y.                                                                                         | Cast of left valve, retaining small portion of shell.                                                                                                                                                                  |
| York Centre, N. Y.<br>.....<br>.....                                                                       | A left valve, imbedded.<br>As <i>Avicula pecteniformis</i> .<br>Referred to present genus.                                                                                                                             |
| Schoharie, N. Y.                                                                                           | A left valve, imbedded.                                                                                                                                                                                                |
| Schoharie Co., N. Y.<br>.....<br>.....                                                                     | Cast of left valve.<br>As <i>Aviculopecten sanduskyensis</i> Meek.<br>Referred to the present species.                                                                                                                 |
| Falls of the Ohio River<br>Cayuga Lake, N. Y.<br>Cazenovia, N. Y.<br>Madison Co., N. Y.<br>Borodino, N. Y. | An exfoliated left valve, imbedded.<br>Somewhat imperfect cast of left valve.<br>External imprint of right valve.<br>Casts of an individual and a left valve.<br>Somewhat imperfect cast of a pair of expanded valves. |
| Helderberg Mts., N. Y.<br>.....<br>.....<br>.....                                                          | As <i>Avicula recticosta</i> . External imprint of left valve.<br>See <i>Aviculopecten fasciculatus</i> .<br>As <i>Lima rugæstriata</i> .<br>Referred to present genus.                                                |
| Rockville, N. Y.<br>Belmont, N. Y.<br>Rockville, N. Y.<br>.....                                            | Cast of left valve. Allegany county.<br>Cast of left valve.<br>Cast of right valve.<br>See <i>Aviculopecten princeps</i> .                                                                                             |
| Schoharie Co., N. Y.<br>Outlet L. Keuka, N. Y.<br>.....                                                    | Imperfect cast of right valve.<br>Cast of left valve.<br>As <i>Avicula ? signata</i> .                                                                                                                                 |
| Rockville, N. Y.                                                                                           | Cast of left valve. Fig. is an enl. to 2 diams. Allegany Co.                                                                                                                                                           |
| Belmont, N. Y.<br>.....                                                                                    | Cast of right valve. Fig. is an enl. to 2 diameters.<br>As <i>Pecten ? striatus</i> .                                                                                                                                  |
| Painted Post, N. Y.<br>.....<br>.....                                                                      | Cast of left valve.<br>See <i>Aviculopecten cancellatus</i> .<br>As <i>Pterinopecten terminalis</i> .                                                                                                                  |
| Williamsville, N. Y.<br>.....                                                                              | A left valve imbedded in block with <i>Conolichas eriopis</i> H., Pal.<br>N. Y., vol. 7, pl. 19 A, fig. 12.<br>See <i>Pterinopecten undosus</i> .                                                                      |

## Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.          | Type or Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.          | REFERENCE.  |                     |       |        |                |
|---------------|-------------------|---------------------|-------------------------------------|-------------|---------------------|-------|--------|----------------|
|               |                   |                     |                                     | Work.       | Vol.                | P.    | Pl.    | Figs.          |
|               |                   |                     | <b>Cardiola</b> Broderip.           |             |                     |       |        |                |
|               |                   |                     | <i>doris</i> .....                  | .....       | .....               | ..... | .....  | .....          |
|               |                   |                     | <i>hero</i> .....                   | .....       | .....               | ..... | .....  | .....          |
|               |                   |                     | <i>radians</i> .....                | .....       | .....               | ..... | .....  | .....          |
|               |                   |                     | <i>robusta</i> .....                | .....       | .....               | ..... | .....  | .....          |
|               |                   |                     | <i>speciosa</i> .....               | .....       | .....               | ..... | .....  | .....          |
|               |                   |                     | sp. ....                            | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | ..... | 80     | 8              |
|               |                   |                     | <b>Cardiomorpha</b> de Koninck.     |             |                     |       |        |                |
|               |                   |                     | <i>bellatula</i> .....              | .....       | .....               | ..... | .....  | .....          |
|               |                   |                     | <i>concentrica</i> .....            | .....       | .....               | ..... | .....  | .....          |
|               |                   |                     | <i>cordatus</i> .....               | .....       | .....               | ..... | .....  | .....          |
|               |                   |                     | <i>eriopia</i> .....                | .....       | .....               | ..... | .....  | .....          |
|               |                   |                     | <i>rotunda</i> .....                | .....       | .....               | ..... | .....  | .....          |
|               |                   |                     | <i>textilis</i> .....               | .....       | .....               | ..... | .....  | .....          |
|               |                   |                     | <i>undulata</i> .....               | .....       | .....               | ..... | .....  | .....          |
|               |                   |                     | <i>zonata</i> .....                 | .....       | .....               | ..... | .....  | .....          |
|               |                   |                     | <b>Cardiopsis</b> M. & W.           |             |                     |       |        |                |
|               |                   |                     | <i>robusta</i> .....                | .....       | .....               | ..... | .....  | .....          |
|               |                   |                     | <b>Cardium</b> Linné.               |             |                     |       |        |                |
|               |                   |                     | <i>vetustum</i> .....               | .....       | .....               | ..... | .....  | .....          |
|               |                   |                     | <b>Cimitaria</b> H. & W.            |             |                     |       |        |                |
| Ham.          | $\frac{4685}{1}$  | Fig'd.              | <i>corrugata</i> (Con.) H. & W.     | P. N. L. S. | pt. 2               | 67    |        |                |
|               |                   |                     | Hall.                               | Pal. N. Y.  | 5, pt. 1            | 465   | 77     | 4              |
| "             | $\frac{4686}{1}$  | "                   | <i>elongata</i> (Con.) H. & W.      | P. N. L. S. | pt. 2               | 69    |        |                |
|               |                   |                     | Hall.                               | Pal. N. Y.  | 5, pt. 1            | 466   | 77     | 5, 8           |
| "             | $\frac{4687}{1}$  | Fig'd Sp. and G. T. | <i>recurva</i> (Con.) H. & W.       | P. N. L. S. | pt. 2               | 68    | .....  | .....          |
|               |                   |                     | Hall.                               | Pal. N. Y.  | 5, pt. 1            | 467   | 77     | 11-13, 16      |
|               |                   |                     | <b>Clinopistha</b> M. & W.          |             |                     |       |        |                |
| U. H.         | $\frac{4216}{1}$  | Type.               | <i>telliniformis</i> .....          | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | ..... | 51     | 31             |
|               |                   |                     | "                                   | " "         | 5, pt. 1            | 513   | 51     | 31             |
|               |                   |                     | <b>Conocardium</b> Bronn.           |             |                     |       |        |                |
|               |                   |                     | <i>attenuatum</i> .....             | .....       | .....               | ..... | .....  | .....          |
| Ham.          | $\frac{4688}{1}$  | Type.               | <i>concinnum</i> .....              | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | ..... | .....  | .....          |
|               |                   |                     | "                                   | " "         | 5, pt. 1            | 414   | 68     | 26, 27         |
| "             | $\frac{4689}{1}$  | Fig'd.              | <i>crassifrons</i> (Con.) ... Hall. | N. Y. S. M. | 13                  | 91    | .....  | .....          |
|               |                   |                     | "                                   | Pal. N. Y.  | 5, pt. 1            | 412   | 68     | 20-23          |
| Scho.         | $\frac{2852}{1}$  | "                   | <i>cuneus</i> (Con.) .....          | " "         | 5, pt. 1            | 409   | 67     | 24             |
| "             | $\frac{2850}{1}$  | "                   | " <i>var. attenuatum</i> (Con) II   | " "         | 5, pt. 1, Pl. & Ex. | ..... | 67     | 6              |
|               |                   |                     | Hall.                               | " "         | 5, pt. 1            | 410   | 67     | 6              |
| "             | $\frac{2850}{3}$  | "                   | " " " " " "                         | " "         | 5, pt. 1, Pl. & Ex. | ..... | 67     | 9              |
|               |                   |                     | "                                   | " "         | 5, pt. 1            | 410   | 67     | 9              |
| "             | $\frac{2853}{2}$  | Type.               | " " <i>nasutum</i> .... Hall.       | " "         | 5, pt. 1, Pl. & Ex. | ..... | 67     | 16, 18-20      |
|               |                   |                     | "                                   | " "         | 5, pt. 1            | 410   | 67     | 16, 18-20      |
| U. H.         | $\frac{2853a}{1}$ | "                   | " " <i>trigonale</i> .... Hall.     | Geol. N. Y. | 4th D.              | 172   | ct. 67 | 6a             |
|               |                   |                     | "                                   | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | ..... | 67     | 28             |
|               |                   |                     | "                                   | " "         | 5, pt. 1            | 410   | 67     | 28             |
|               |                   |                     | "                                   | " "         | 5, pt. 1, Pl. & Ex. | ..... | 68     | 14             |
| "             | $\frac{2853a}{2}$ | "                   | " " " " " "                         | " "         | 5, pt. 1, Pl. & Ex. | ..... | 68     | 4-9            |
|               |                   |                     | "                                   | " "         | 5, pt. 1            | 410   | 68     | 4-9            |
| "             | $\frac{2853a}{3}$ | "                   | " " " " " "                         | " "         | 5, pt. 1, Pl. & Ex. | ..... | 68     | 12, 13, 15, 16 |
|               |                   |                     | "                                   | " "         | 5, pt. 1            | 410   | 68     | 12, 13, 15, 16 |
| Ham.          | $\frac{4690}{1}$  | "                   | <i>denticulatum</i> .....           | Hall.       | 5, pt. 1, Pl. & Ex. | ..... | 68     | 24, 25         |
|               |                   |                     | "                                   | " "         | 5, pt. 1            | 413   | 68     | 24, 25         |



| LOCALITY.            | REMARKS.                                                         |
|----------------------|------------------------------------------------------------------|
| .....                | See <i>Paracardium doris</i> .                                   |
| .....                | " <i>Panenka hero</i> .                                          |
| .....                | " " <i>abrupta</i> , <i>P. potens</i> and <i>P. retusa</i> .     |
| .....                | " " <i>robusta</i> .                                             |
| .....                | " <i>Glyptocardia speciosa</i> .                                 |
| .....                | " <i>Panenka mollis</i> .                                        |
| .....                | " <i>Grammysia bellatula</i> .                                   |
| .....                | " " <i>zonata</i> .                                              |
| .....                | " " <i>globosa</i> .                                             |
| .....                | " " <i>eriopia</i> .                                             |
| .....                | " <i>Schizodus degener</i> .                                     |
| .....                | " <i>Euthydesma subtextile</i> .                                 |
| .....                | " " " "                                                          |
| .....                | " <i>Grammysia zonata</i> .                                      |
| .....                | " <i>Panenka robusta</i> .                                       |
| .....                | " <i>Præcardium vetustum</i> .                                   |
| Near Delphi, N. Y.   | Cast of right valve.                                             |
| Schoharie Co., N. Y. | Casts of a left valve and of an individual.                      |
| .....                | Made type of genus <i>Cimitaria</i> .                            |
| Madison Co., N. Y.   | Casts of two individuals.                                        |
| .....                | As <i>Dystactella telliniformis</i> , type of genus and species. |
| Western New York.    | Cast of individual.                                              |
| .....                | See <i>Conocardium cuneus</i> , var. <i>attenuatum</i> .         |
| Onondaga Co., N. Y.  | Casts of two individuals. Loose blocks from Pratt's Falls.       |
| .....                | As type of <i>Conocardium eboraceum</i> Hall.                    |
| York, N. Y.          | " " " " Two individuals.                                         |
| Albany Co., N. Y.    | A flattened individual and its matrix.                           |
| .....                | As <i>Conocardium attenuatum</i> Conrad.                         |
| Albany Co., N. Y.    | An imbedded individual.                                          |
| .....                | As <i>Conocardium attenuatum</i> Conrad.                         |
| Schoharie, N. Y.     | Cast of individual.                                              |
| .....                | As type of <i>Conocardium nasutum</i> .                          |
| Schoharie, N. Y.     | Two internal casts, each retaining some shell.                   |
| .....                | As type of <i>Pleurorhynchus trigonalis</i> Hall.                |
| .....                | As <i>Conocardium trigonale</i> .                                |
| .....                | " " " "                                                          |
| Williamsville, N. Y. | Internal cast retaining portions of shell, imbedded.             |
| .....                | As <i>Conocardium trigonale</i> .                                |
| Falls of Ohio River. | Two individuals, nearly entire.                                  |
| .....                | As <i>Conocardium trigonale</i> .                                |
| Columbus, Ohio.      | Two individuals and an internal cast of another.                 |
| York, N. Y.          | An imperfect individual.                                         |

## Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                      | REFERENCE.  |                        |       |         |           |
|---------------|------------------|--------------------|-------------------------------------------------|-------------|------------------------|-------|---------|-----------|
|               |                  |                    |                                                 | Work.       | Vol.                   | P.    | Pl.     | Figs.     |
|               |                  |                    | <b>Conocardium</b> Bronn.— <i>Cont.</i>         |             |                        |       |         |           |
|               |                  |                    | <i>eboraceum</i> .....                          | .....       | .....                  | ..... | .....   | .....     |
|               |                  |                    | <i>nasutum</i> .....                            | .....       | .....                  | ..... | .....   | .....     |
| Ham.          | <u>4691</u><br>1 | Type.              | normale..... <i>Hall.</i>                       | Pal. N. Y.  | 5, pt. 1,<br>Pl. & Ex. | ..... | 68      | 17-19     |
|               |                  |                    | "                                               | " "         | 5, pt. 1               | 411   | 68      | 17-19     |
| U. H.         | <u>4001</u><br>2 | Fig'd.             | ohioense ( <i>Meek</i> ).... <i>Hall.</i>       | " "         | 5, pt. 1               | 411   | 68      | 2, l.v.   |
|               |                  |                    | <i>trigonale</i> .....                          | .....       | .....                  | ..... | .....   | .....     |
|               |                  |                    | <b>Crenipecten</b> Hall.                        |             |                        |       |         |           |
| Chem.         | <u>4692</u><br>1 | Fig'd.             | amplus..... <i>Hall.</i>                        | Pal. N. Y.  | 5, pt. 1,<br>Pl. & Ex. | ..... | 9       | 18        |
|               |                  |                    | "                                               | " "         | 5, pt. 1               | 81    | 9       | 18        |
| "             | <u>4693</u><br>1 | Gen. and Sp. Type. | crenulatus..... <i>Hall.</i>                    | Geol. N. Y. | 4th D.                 | 265   | ct. 119 | 8         |
|               |                  |                    | "                                               | Pal. N. Y.  | 5, pt. 1,<br>Pl. & Ex. | ..... | 9       | 16, 17    |
|               |                  |                    | "                                               | " "         | 5, pt. 1               | lxi   | .....   | .....     |
|               |                  |                    | "                                               | " "         | 82                     | 9     | 16, 17  |           |
| "             | "                | "                  | "                                               | " "         | 5, pt. 1               | 82    | 9       | 7, 8      |
| "             | <u>4694</u><br>1 | Type.              | glaber..... <i>Hall.</i>                        | Geol. N. Y. | 4th D.                 | 265   | ct. 119 | 10        |
|               |                  |                    | "                                               | Pal. N. Y.  | 5, pt. 1,<br>Pl. & Ex. | ..... | 9       | 20        |
|               |                  |                    | "                                               | N. Y. S. M. | 35                     | 280   |         |           |
|               |                  |                    | "                                               | Pal. N. Y.  | 5, pt. 1               | 85    | 9       | 20        |
| "             | <u>4695</u><br>1 | "                  | leon..... <i>Hall.</i>                          | " "         | 5, pt. 1,<br>Pl. & Ex. | ..... | 9       | 12        |
|               |                  |                    | "                                               | N. Y. S. M. | 35                     | 282   |         |           |
|               |                  |                    | "                                               | Pal. N. Y.  | 5, pt. 1               | 88    | 9       | 12        |
|               |                  |                    | "                                               | "           | "                      | 83    | 8       |           |
| "             | <u>4696</u><br>1 | "                  | micropterus..... <i>Hall.</i>                   | " "         | 5, pt. 1,<br>Pl. & Ex. | ..... | 9       | 23        |
|               |                  |                    | "                                               | N. Y. S. M. | 35                     | 280   |         |           |
|               |                  |                    | "                                               | Pal. N. Y.  | 5, pt. 1               | 86    | 9       | 23        |
| "             | <u>4697</u><br>1 | "                  | obsoletus..... <i>Hall.</i>                     | Geol. N. Y. | 4th D.                 | 265   | ct. 119 | 11        |
|               |                  |                    | "                                               | Pal. N. Y.  | 5, pt. 1,<br>Pl. & Ex. | ..... | 9       | 21        |
|               |                  |                    | "                                               | N. Y. S. M. | 35                     | 279   |         |           |
|               |                  |                    | "                                               | Pal. N. Y.  | 5, pt. 1               | 84    | 9       | 21        |
| "             | "                | "                  | "                                               | " "         | 5, pt. 1               | 84    | 9       | 19        |
|               |                  |                    | <b>Cypricardella</b> Hall.                      |             |                        |       |         |           |
| Ham.          | <u>4776</u><br>1 | Fig'd.             | bellistriata ( <i>Con.</i> ) <i>H. &amp; W.</i> | P. N. L. S. | pt. 2                  | 31    | .....   | .....     |
|               |                  |                    | <i>Hall.</i>                                    | Pal. N. Y.  | 5, pt. 1,<br>Pl. & Ex. | ..... | 73      | 9, 13, 19 |
|               |                  |                    | "                                               | " "         | 5, pt. 1               | 308   | 73      | 9, 13, 19 |
| "             | <u>4776</u><br>2 | "                  | "                                               | " "         | 5, pt. 1<br>Pl. & Ex.  | ..... | 73      | 11        |
|               |                  |                    | "                                               | " "         | 5, pt. 1               | 308   | 73      | 11        |
| "             | <u>4776</u><br>1 | "                  | "                                               | " "         | 5, pt. 1,<br>Pl. & Ex. | ..... | 73      | 20-22     |
|               |                  |                    | "                                               | " "         | 5, pt. 1               | 308   | 73      | 20-22     |
| "             | <u>4777</u><br>1 | Type.              | complanata.... <i>H. &amp; W.</i>               | P. N. L. S. | pt. 2                  | 33    | .....   | .....     |
|               |                  |                    | <i>Hall.</i>                                    | Pal. N. Y.  | 5, pt. 1,<br>Pl. & Ex. | ..... | 74      | 14, 16-18 |
|               |                  |                    | "                                               | " "         | 5, pt. 1               | 311   | 74      | 14, 16-18 |
| "             | <u>4777</u><br>2 | "                  | " ( <i>H. &amp; W.</i> )... <i>Hall.</i>        | " "         | 5, pt. 1,<br>Pl. & Ex. | ..... | 74      | 19        |
|               |                  |                    | "                                               | " "         | 5, pt. 1               | 311   | 74      | 19        |



| LOCALITY.                                        | REMARKS.                                                                                                                                                                                                                                                       |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                                            | See <i>Conocardium crassifrons</i> .                                                                                                                                                                                                                           |
| .....                                            | “ “ <i>cuneus</i> var. <i>nasutum</i> .                                                                                                                                                                                                                        |
| Cumberland, Md.<br>Falls of Ohio River.<br>..... | Casts of two individuals.<br>Almost entire, somewhat exfoliated individual, imbedded.<br>See <i>Conocardium cuneus</i> var. <i>trigonale</i> .                                                                                                                 |
| .....                                            | As <i>Crenipecten crenulatus</i> ?                                                                                                                                                                                                                             |
| Rockville, N. Y.<br>.....                        | Cast of left valve somewhat flattened. Allegany county. “ Referred to this species with some doubt.”<br>As <i>Pecten</i> ? <i>crenulatus</i> .                                                                                                                 |
| .....                                            | Genus <i>Crenipecten</i> established on p. 3 with <i>C. leon</i> and <i>C. crenulatus</i> referred to as examples.                                                                                                                                             |
| .....                                            | Mentioned as the sole type of the genus.                                                                                                                                                                                                                       |
| Rockville, N. Y.<br>“ “<br>.....                 | Cast of left valve. Allegany county.<br>Casts of two right valves in sep. blocks. See also <i>Crenipecten amplus</i> .<br>As <i>Lima glaber</i> .                                                                                                              |
| Belmont, N. Y.<br>.....                          | Cast of left valve.<br>Genus <i>Crenipecten</i> established on p. 3 with <i>C. leon</i> and <i>C. crenulatus</i> referred to as examples, but <i>C. crenulatus</i> alone is mentioned as the type of the genus on p. lxi of the regular edition of the volume. |
| Leon, N. Y.                                      | Cast of left valve.                                                                                                                                                                                                                                            |
| Belmont, N. Y.<br>.....                          | Cast of right valve. Imprint of same is present.<br>As <i>Lima</i> ? <i>obsoleta</i> .                                                                                                                                                                         |
| Belmont, N. Y.<br>“ “                            | Cast of right valve.<br>Cast of left valve.                                                                                                                                                                                                                    |
| .....                                            | As <i>Microdon bellastriata</i> .                                                                                                                                                                                                                              |
| .....                                            | “ “ ( <i>Microdonella</i> ) ( <i>Eodon</i> ) <i>bellistriatus</i> .                                                                                                                                                                                            |
| Nr. Ludlowville, N.Y.<br>.....                   | “ “ ( <i>Cypricardella</i> ) <i>bellistriatus</i> . Casts of left valve and two right valves.                                                                                                                                                                  |
| .....                                            | As <i>Microdon</i> ( <i>Microdonella</i> ) ( <i>Eodon</i> ) <i>bellistriatus</i> .                                                                                                                                                                             |
| Near Ithaca, N. Y.<br>.....                      | “ “ ( <i>Cypricardella</i> ) <i>bellistriatus</i> . Cast of individual.<br>“ “ ( <i>Microdonella</i> ) ( <i>Eodon</i> ) <i>bellistriatus</i> .                                                                                                                 |
| Nr. Ludlowville, N.Y.<br>.....                   | “ “ ( <i>Cypricardella</i> ) <i>bellistriatus</i> . Casts of two pairs of expanded valves.                                                                                                                                                                     |
| .....                                            | As <i>Microdon</i> ? <i>complanatus</i> .                                                                                                                                                                                                                      |
| .....                                            | “ “ ( <i>Microdonella</i> ) ( <i>Eodon</i> ) <i>complanatus</i> .                                                                                                                                                                                              |
| Jefferson, N. Y.<br>.....                        | “ “ ( <i>Cypricardella</i> ) <i>complanatus</i> . Casts of two left and two right valves.                                                                                                                                                                      |
| .....                                            | As <i>Microdon</i> ( <i>Microdonella</i> ) ( <i>Eodon</i> ) <i>complanatus</i> .                                                                                                                                                                               |
| Schoharie Co., N. Y.                             | “ “ ( <i>Cypricardella</i> ) <i>complanatus</i> . Int. cast of right valve.                                                                                                                                                                                    |

## Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                   | REFERENCE.  |                   |      |      |                |
|---------------|------------------|--------------------|----------------------------------------------|-------------|-------------------|------|------|----------------|
|               |                  |                    |                                              | Work.       | Vol.              | P.   | Pl.  | Figs.          |
| Ham.          | $\frac{4778}{1}$ | Type.              | <b>Cypricardella</b> Hall— <i>Cont.</i>      |             |                   |      |      |                |
|               |                  |                    | gregaria . . . . . <i>H. &amp; W.</i>        | P. N. L. S. | pt. 2             | 32   | .... | .....          |
|               |                  |                    | <i>Hall.</i>                                 | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | .... | 73   | 1, 4, 6        |
|               |                  |                    | "                                            | "           | 5, pt. 1          | 309  | 73   | 1, 4, 6        |
| Chem.         | $\frac{4778}{2}$ | "                  | " ( <i>H. &amp; W.</i> ) <i>Hall.</i>        | "           | 5, pt. 1, Pl.&Ex. | .... | 74   | 1, 2           |
|               |                  |                    | "                                            | "           | 5, pt. 1          | 309  | 74   | 1, 2           |
| "             | $\frac{4778}{2}$ | "                  | " " " "                                      | "           | 5, pt. 1, Pl.&Ex. | .... | 74   | 3              |
|               |                  |                    | "                                            | "           | 5, pt. 1          | 309  | 74   | 3              |
| "             | $\frac{4778}{3}$ | "                  | " " " "                                      | "           | 5, pt. 1, Pl.&Ex. | .... | 74   | 4              |
|               |                  |                    | "                                            | "           | 5, pt. 1          | 309  | 74   | 4              |
| Ham.          | $\frac{4779}{1}$ | "                  | tenuistriata . . . . <i>H. &amp; W.</i>      | P. N. L. S. | pt. 2             | 32   | .... | .....          |
|               |                  |                    | <i>Hall.</i>                                 | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | .... | 73   | 23             |
|               |                  |                    | "                                            | "           | 5, pt. 1          | 310  | 73   | 23             |
| "             | $\frac{4779}{2}$ | "                  | " ( <i>H. &amp; W.</i> ) <i>Hall.</i>        | "           | 5, pt. 1, Pl.&Ex. | .... | 73   | 24, 25, 29, 30 |
|               |                  |                    | "                                            | "           | 5, pt. 1          | 310  | 73   | 24, 25, 29, 30 |
| "             | $\frac{4779}{3}$ | "                  | " " " "                                      | "           | 5, pt. 1, Pl.&Ex. | .... | 73   | 26             |
|               |                  |                    | "                                            | "           | 5, pt. 1          | 310  | 73   | 26             |
| "             | $\frac{4779}{4}$ | "                  | " " " "                                      | "           | 5, pt. 1, Pl.&Ex. | .... | 74   | 21             |
|               |                  |                    | "                                            | "           | 5, pt. 1          | 310  | 74   | 21             |
|               |                  |                    | <b>Cypricardia</b> Lamarck.                  |             |                   |      |      |                |
|               |                  |                    | <i>contracta</i> . . . . .                   |             |                   |      |      |                |
|               |                  |                    | <i>rhombea</i> . . . . .                     |             |                   |      |      |                |
| Ham. Scho.    | $\frac{4698}{1}$ | Fig'd.             | <b>Cypricardinia</b> Hall.                   |             |                   |      |      |                |
|               |                  |                    | indenta ( <i>Conrad</i> ) . . . <i>Hall.</i> | Pal. N. Y.  | 5, pt. 1          | 485  | 79   | 12, 13         |
|               |                  |                    | planulata ( <i>Conrad</i> ) . . <i>Hall.</i> | "           | 5, pt. 1          | 484  | 79   | 1, 4, 5        |
|               |                  |                    | <b>Cypricardites</b> Conrad.                 |             |                   |      |      |                |
|               |                  |                    | <i>altus</i> . . . . .                       |             |                   |      |      |                |
|               |                  |                    | <i>carinatus</i> . . . . .                   |             |                   |      |      |                |
|               |                  |                    | <b>Cytherodon</b> H. & W.                    |             |                   |      |      |                |
|               |                  |                    | <i>appressus</i> . . . . .                   |             |                   |      |      |                |
|               |                  |                    | <i>chemungensis</i> . . . . .                |             |                   |      |      |                |
|               |                  |                    | <i>gregarius</i> . . . . .                   |             |                   |      |      |                |
| Ham.          | $\frac{4699}{1}$ | Fig'd Sp. and G.T. | nasutus . . . . . <i>Hall.</i>               | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | .... | 75   | 10-12          |
|               |                  |                    | "                                            | N. Y. S. M. | 23                | .... | 14   | 21             |
|               |                  |                    | "                                            | Pal. N. Y.  | 5, pt. 1          | 511  | 75   | 10-12          |
|               |                  |                    |                                              |             |                   |      | 95   | 30             |
|               |                  |                    | <i>oblatus</i> . . . . .                     |             |                   |      |      |                |
|               |                  |                    | <i>pauper</i> . . . . .                      |             |                   |      |      |                |
|               |                  |                    | <i>quadrangularis</i> . . . . .              |             |                   |      |      |                |
|               |                  |                    | <i>rhombeus</i> . . . . .                    |             |                   |      |      |                |
|               |                  |                    | sp. . . . .                                  | N. Y. S. M. | 23                | .... | 14   | 21             |
|               |                  |                    | <i>Dystactella</i> Hall. . . . .             |             |                   |      |      |                |
|               |                  |                    | <i>telliniformis</i> . . . . .               |             |                   |      |      |                |
|               |                  |                    | <b>Ectenodesma</b> Hall.                     |             |                   |      |      |                |
| Chem.         | $\frac{4700}{1}$ | Gen. and Sp. Type. | birostratum . . . . . <i>Hall.</i>           | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | .... | 23   | 27             |
|               |                  |                    | "                                            | N. Y. S. M. | 35                | 399  |      |                |
|               |                  |                    | "                                            | Pal. N. Y.  | 5, pt. 1          | 242  | 23   | 27             |
| "             | $\frac{4700}{2}$ | "                  | " . . . . . "                                | "           | 5, pt. 1          | 242  | 23   | 28             |



| LOCALITY.                             | REMARKS.                                                                                                                    |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| .....                                 | As <i>Microdon gregaria</i> .                                                                                               |
| .....                                 | “ “ ( <i>Microdonella</i> ) ( <i>Eodon</i> ) <i>gregarius</i> .                                                             |
| Jefferson Co., N. Y.                  | “ “ ( <i>Cypricardella</i> ) <i>gregarius</i> . Casts of one right and two left valves.                                     |
| .....                                 | As <i>Microdon</i> ( <i>Microdonella</i> ) ( <i>Eodon</i> ) <i>gregarius</i> ?                                              |
| Cortland, N. Y.                       | “ “ ( <i>Cypricardella</i> ) <i>gregarius</i> . Casts of two opp. valves.                                                   |
| .....                                 | “ “ ( <i>Microdonella</i> ) ( <i>Eodon</i> ) <i>gregarius</i> ?                                                             |
| Near Ithaca, N. Y.                    | “ “ ( <i>Cypricardella</i> ) <i>gregarius</i> . Cast of left valve.                                                         |
| .....                                 | “ “ ( <i>Microdonella</i> ) ( <i>Eodon</i> ) <i>bellistriatus</i> Conrad.                                                   |
| Near Elmira, N. Y.                    | “ “ ( <i>Cypricardella</i> ) <i>gregarius</i> . Cast of left valve.                                                         |
| .....                                 | “ “ <i>tenuistriata</i> .                                                                                                   |
| .....                                 | “ “ ( <i>Microdonella</i> ) ( <i>Eodon</i> ) <i>tenuistriatus</i> .                                                         |
| Fultonham, N. Y.                      | “ “ ( <i>Cypricardella</i> ) <i>tenuistriatus</i> . Cast of right valve.                                                    |
| .....                                 | “ “ ( <i>Microdonella</i> ) ( <i>Eodon</i> ) <i>tenuistriatus</i> .                                                         |
| Near Hamilton, N. Y.                  | “ “ ( <i>Cypricardella</i> ) <i>tenuistriatus</i> . Casts of two left and one right valve and of a pair of expanded valves. |
| .....                                 | As <i>Microdon</i> ( <i>Microdonella</i> ) ( <i>Eodon</i> ) <i>tenuistriatus</i> .                                          |
| Summit, N. Y.                         | “ “ ( <i>Cypricardella</i> ) <i>tenuistriatus</i> . Cast of a pair of expanded valves. Schoharie county.                    |
| .....                                 | As <i>Microdonella</i> ( <i>Microdonella</i> ) ( <i>Eodon</i> ) <i>tenuistriatus</i> .                                      |
| Worcester, N. Y.                      | “ <i>Microdon</i> ( <i>Cypricardella</i> ) <i>tenuistriatus</i> . Cast of right valve.                                      |
| .....                                 | See <i>Sphenotus contractus</i> .                                                                                           |
| .....                                 | “ <i>Schizodus rhombeus</i> .                                                                                               |
| Cayuga Co. ?, N. Y.                   | Casts of two opposite valves. From “Hopeton?”                                                                               |
| Schoharie, N. Y.                      | An imbedded right valve and the cast of an individual.                                                                      |
| .....                                 | See <i>Modiomorpha alta</i> .                                                                                               |
| .....                                 | “ <i>Goniophora carinata</i> .                                                                                              |
| .....                                 | See <i>Schizodus appressus</i> and <i>S. chemungensis</i> .                                                                 |
| .....                                 | “ <i>Schizodus chemungensis</i> .                                                                                           |
| .....                                 | “ “ <i>gregarius</i> .                                                                                                      |
| .....                                 | As <i>Cytherodon</i> ( <i>Schizodus</i> ) <i>nasutus</i> .                                                                  |
| .....                                 | “ “ ———.                                                                                                                    |
| Hardy Co., Va.                        | Internal cast of individual.                                                                                                |
| .....                                 | See <i>Edmondia rhomboidea</i> and <i>Schizodus chemungensis</i> .                                                          |
| .....                                 | “ <i>Paracyclas pauper</i> .                                                                                                |
| .....                                 | “ <i>Schizodus chemungensis</i> var. <i>quadrangularis</i> .                                                                |
| .....                                 | “ <i>Schizodus rhombeus</i> .                                                                                               |
| .....                                 | “ <i>Cytherodon nasutus</i> .                                                                                               |
| .....                                 | Synonym of <i>Clinopistha</i> .                                                                                             |
| .....                                 | See <i>Clinopistha telliniformis</i> .                                                                                      |
| 4 miles north of Chenango Forks, N.Y. | Cast of right valve.                                                                                                        |
| Franklin, N. Y.                       | Cast of left valve. Somewhat worn.                                                                                          |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                     | REFERENCE.             |                          |        |           |            |
|---------------|------------------|-------------------|------------------------------------------------|------------------------|--------------------------|--------|-----------|------------|
|               |                  |                   |                                                | Work.                  | Vol.                     | P.     | Pl.       | Figs.      |
| Chem.         | <u>4701</u><br>1 | Type.             | <b>Edmondia</b> de Koninck.                    |                        |                          |        |           |            |
|               |                  |                   | <i>burlingtonensis</i> .....                   |                        |                          |        |           |            |
|               |                  |                   | <i>obliqua</i> .....                           |                        |                          |        |           |            |
|               | <u>4702</u><br>1 | "                 | Philipi..... <i>H. &amp; W. Hall.</i>          | P. N. L. S. Pal. N. Y. | pt. 2 5, pt. I           | 90 387 |           | 14, 29     |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I                 | 387    | 64        | 4          |
|               |                  |                   | rhomboidea..( <i>H.</i> ) <i>Miller. Hall.</i> | Am. P. F. Pal. N. Y.   | ..... 5, pt. I, Pl.&Ex.  | 191    | 64        |            |
|               | <u>4702</u><br>2 | "                 | " .....                                        | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 64        | 8          |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I                 | 386    | 64        | 8          |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 95        | 16         |
|               | <u>4703</u><br>1 | "                 | ?subcarinata..... <i>Hall.</i>                 | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 75        | 42         |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I                 | 386    | 75        | 42         |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 95        | 15         |
|               | <u>4704</u><br>1 | "                 | subovata .....                                 | " "                    | 5, pt. I                 | 389    | 64        | 31         |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 64        | 19, 27, 28 |
|               |                  |                   | " ? .....                                      | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 64        | 10         |
|               | <u>4704</u><br>2 | "                 | " ? .....                                      | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 64        | 10         |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I                 | 389    | 64        | 21         |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 64        | 21         |
| Ham.          | <u>4705</u><br>1 | Type.             | tumidula .....                                 | " "                    | 5, pt. I                 | 389    | 64        | 21         |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I                 | vi     | .....     |            |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 64        | 23         |
|               | <u>4706</u><br>1 | Type.             | <i>undulata</i> .....                          | " "                    | 5, pt. I                 | 388    | 64        | 23         |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I                 | 388    | 64        | 23         |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I                 | 388    | 64        | 23         |
|               | <u>4707</u><br>1 | Fig'd.            | <b>Elymella</b> Hall.                          |                        |                          |        |           |            |
|               |                  |                   | <i>fabalis</i> .....                           | Pal. N. Y.             | 5, pt. I                 | 502    | 40        | 5, 9       |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 40        | 5, 9       |
|               | <u>4708</u><br>1 | Fig'd.            | <i>nuculoides</i> ? .....                      | " "                    | 5, pt. I                 | 503    | 40        | 10         |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 40        | 10         |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 40        | 10         |
|               | <u>4708</u><br>2 | Gen. and Sp.Type. | <b>Euthydesma</b> Hall.                        |                        |                          |        |           |            |
|               |                  |                   | <i>subtextile</i> ..... <i>Hall.</i>           | Geol. N. Y. Pal. N. Y. | 4th D. 5, pt. I, Pl.&Ex. | 246    | ct.107 63 | 6 11       |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I                 | 385    | 63        | 11         |
|               | <u>4708</u><br>3 | "                 | " .....                                        | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 63        | 12         |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I                 | 385    | 63        | 12         |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 63        | 13         |
|               | <u>4709</u><br>1 | Type.             | " .....                                        | " "                    | 5, pt. I                 | 385    | 63        | 13         |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 63        | 16         |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I                 | 385    | 63        | 16         |
|               | <u>4710</u><br>1 | Type.             | <b>Glossites</b> Hall.                         |                        |                          |        |           |            |
|               |                  |                   | <i>depressus</i> ..... <i>Hall.</i>            | " "                    | 5, pt. I                 | 496    | 40        | 17         |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 96 40     | 12 17      |
|               | <u>4711</u><br>1 | Type.             | <i>lingualis</i> ..... <i>Hall.</i>            | " "                    | 5, pt. I                 | 497    | 40        | 16, 19     |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 40        | 16, 19     |
|               |                  |                   | <i>subtenuis</i> ..... <i>Hall.</i>            | " "                    | 5, pt. I                 | 495    | 40        | 12         |
|               | <u>4711</u><br>1 | Type.             | " .....                                        | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 40        | 12         |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 40        | 12         |
|               |                  |                   | " .....                                        | " "                    | 5, pt. I, Pl.&Ex.        | .....  | 40        | 12         |



| LOCALITY.                            | REMARKS.                                                                              |
|--------------------------------------|---------------------------------------------------------------------------------------|
| .....                                | See <i>Edmondia subovata</i> and <i>E. tumidula</i> .                                 |
| .....                                | “ “ <i>tumidula</i> .                                                                 |
| Belmont, N. Y.                       | Casts of two valves in separate blocks.                                               |
| “ “                                  | Cast of valve. See also <i>Edmondia subovata</i> .                                    |
| .....                                | <i>Nomen nudum</i> .                                                                  |
| N. of Panama, N. Y.                  | Cast of right valve.                                                                  |
| .....                                | As <i>Cytherodon oblatus</i> .                                                        |
| Near Portville, N. Y.                | Internal cast of left valve.                                                          |
| Near Olean, N. Y.                    | Cast of right valve in fine conglomerate.                                             |
| Belmont, N. Y.                       | As <i>Edmondia burlingtonensis</i> W. & W. Casts of three right valves.               |
| .....                                | As a type of <i>Edmondia Philipi</i> H. & W.                                          |
| Belmont, N. Y.                       | Cast of left valve doubtfully referred to this species.                               |
| .....                                | As <i>Edmondia burlingtonensis</i> W. & W.                                            |
| Near Ithaca, N. Y.                   | Cast of left valve referred with doubt to this species.                               |
| .....                                | Name proposed in the list of errata instead of <i>Edmondia obliqua</i> .              |
| .....                                | As <i>Edmondia burlingtonensis</i> W. & W.                                            |
| Rockville, N. Y.                     | As type of <i>Edmondia obliqua</i> Hall. Cast of right valve.                         |
| .....                                | See <i>Sanguinolites undulatus</i> .                                                  |
| Keuka Lake, N. Y.                    | As <i>Modiomorpha ? hyalea</i> H. & W. Casts of two pairs of expanded valves.         |
| Speedsville, N. Y.                   | As <i>Modiomorpha ? hyalea</i> H. & W. Cast of right valve. From “Jones quarry.”      |
| .....                                | As <i>Astarte subtextilis</i> .                                                       |
| .....                                | As <i>Cardiomorpha textilis</i> .                                                     |
| Chautauqua Co., N. Y.                | Cast of left valve. From the shore of L. Erie six miles northeast of Portland Harbor. |
| .....                                | As <i>Cardiomorpha textilis</i> .                                                     |
| Western New York.                    | Cast of left valve.                                                                   |
| .....                                | As <i>Cardiomorpha textilis</i> .                                                     |
| Chautauqua Co., N. Y.                | Cast of left valve. From the shore of Lake Erie.                                      |
| .....                                | As a type of <i>Cardiomorpha undulata</i> .                                           |
| Chautauqua Co., N. Y.                | Imperfect cast of large left valve. From the shore of Lake Erie.                      |
| Buck’s quarry,<br>near Elmira, N. Y. | As <i>Modiomorpha ? amygdalina</i> Winchell. Cast of left valve.                      |
| Belmont, N. Y.                       | “ “ “ “ Casts of two opposite valves, in separate blocks.                             |
| Near Geneva, N. Y.                   | As <i>Mordiomorpha ? amygdalina</i> Winchell. Cast of right valve.                    |

## Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.          | Type or Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.     | REFERENCE.  |                     |      |      |           |
|---------------|-------------------|---------------------|--------------------------------|-------------|---------------------|------|------|-----------|
|               |                   |                     |                                | Work.       | Vol.                | P.   | Pl.  | Figs.     |
| Gen.          | <u>4712</u><br>1  | Gen. and Sp. Type.  | <b>Glyptocardia</b> Hall.      |             |                     |      |      |           |
|               |                   |                     | speciosa . . . . . Hall.       | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | .... | 70   | 4         |
| Port.         | <u>4712</u><br>2  | "                   | "                              | " "         | 5, pt. 1            | 426  | 70   | 4         |
|               |                   |                     | "                              | " "         | 5, pt. 1, Pl. & Ex. | .... | 70   | 5-8       |
| Ham.          | <u>4713</u><br>1  | Fig'd Sp. and G. T. | <b>Glyptodesma</b> Hall.       |             |                     |      |      |           |
|               |                   |                     | erectum (Conrad) . . Hall.     | Pal. N. Y.  | 5, pt. 1            | 153  | 11   | 1, 2      |
| "             | <u>4713</u><br>2  | "                   | " " " "                        | " "         | 5, pt. 1            | 153  | 11   | 13        |
| "             | <u>4713</u><br>3  | "                   | " " " "                        | " "         | 5, pt. 1            | 153  | 11   | 15        |
| "             | <u>4713</u><br>4  | "                   | " " " "                        | " "         | 5, pt. 1            | 153  | 11   | 3         |
| "             | <u>4713</u><br>5  | "                   | " " " "                        | " "         | 5, pt. 1            | 153  | 11   | 4         |
| "             | <u>4713</u><br>6  | "                   | " " " "                        | " "         | 5, pt. 1            | 153  | 11   | 6         |
| "             | <u>4713</u><br>7  | "                   | " " " "                        | " "         | 5, pt. 1            | 153  | 11   | 9         |
| "             | <u>4713</u><br>8  | "                   | " " " "                        | " "         | 5, pt. 1            | 153  | 11   | 10        |
| "             | <u>4713</u><br>9  | "                   | " " " "                        | " "         | 5, pt. 1            | 153  | 12   | 2, 7      |
| "             | <u>4713</u><br>10 | "                   | " " " "                        | " "         | 5, pt. 1            | 153  | 12   | 3         |
| "             | <u>4713</u><br>11 | "                   | " " " "                        | " "         | 5, pt. 1            | 153  | 12   | 9         |
| "             | <u>4713</u><br>12 | "                   | " " " "                        | " "         | 5, pt. 1            | 153  | 13   | 1, 2      |
| "             | <u>4713</u><br>13 | "                   | " " " "                        | " "         | 5, pt. 1            | 153  | 13   | 3, 4      |
| "             | <u>4713</u><br>14 | "                   | " " " "                        | " "         | 5, pt. 1            | 153  | 13   | 12, 13    |
| "             | <u>4713</u><br>15 | "                   | " " " "                        | " "         | 5, pt. 1            | 153  | 13   | 14        |
| "             | <u>4713</u><br>16 | "                   | " " " "                        | " "         | 5, pt. 1            | 153  | 25   | 15        |
| "             | <u>4714</u><br>1  | Type.               | " var. obliquum Hall.          | " "         | 5, pt. 1, Pl. & Ex. | .... | 13   | 5-7       |
| "             | <u>4713</u><br>2  | "                   | " " " "                        | " "         | 5, pt. 1            | 155  | 13   | 5-7       |
| U. H.         | <u>4209</u><br>1  | "                   | occidentale . . . . . Hall.    | " "         | 5, pt. 1, Pl. & Ex. | .... | 15   | 8-10      |
| Ham.          | <u>4714</u><br>1  | "                   | subrectum . . . . . Whitfield. | " "         | 5, pt. 1            | 157  | 15   | 12        |
|               |                   |                     | "                              | " "         | 5, pt. 1            | 157  | 86   | 9         |
| "             | <u>4715</u><br>1  | "                   | "                              | N. Y. A. S. | 2                   | 215  | .... | ....      |
|               |                   |                     | "                              | " "         | 5                   | 557  | 11   | 20        |
| "             | <u>4716</u><br>1  | "                   | "                              | Geol. O.    | 7                   | 450  | 7    | 20        |
|               |                   |                     | "                              | " "         | "                   | "    | "    | "         |
| "             | <u>4716</u><br>2  | Fig'd.              | <b>Goniophora</b> Phillips.    |             |                     |      |      |           |
|               |                   |                     | acuta . . . . . H. & W.        | P. N. L. S. | pt. 2               | 37   | .... | ....      |
| "             | <u>4716</u><br>3  | "                   | " (H. & W.) Hall.              | Pal. N. Y.  | 5, pt. 1            | 295  | 43   | 1, 2      |
| "             | <u>4716</u><br>4  | "                   | " (H. & W.) Hall.              | " "         | 5, pt. 1            | 295  | 43   | 3         |
| "             | <u>4716</u><br>5  | "                   | carinata . . . . . Conrad.     | Geol. N. Y. | 1841                | 53   | 1    | 21        |
| "             | <u>4716</u><br>6  | "                   | " Hall.                        | Pal. N. Y.  | 5, pt. 1            | 301  | 44   | 8         |
| "             | <u>4716</u><br>7  | "                   | " (Conrad) . . . Hall.         | " "         | 5, pt. 1            | 301  | 44   | 6         |
| "             | <u>4716</u><br>8  | "                   | " " " "                        | " "         | 5, pt. 1            | 301  | 44   | 7         |
| "             | <u>4717</u><br>1  | Type.               | glabra . . . . .               | " "         | "                   | "    | "    | "         |
| "             | <u>4717</u><br>2  | "                   | glaucus . . . . . H. & W.      | P. N. L. S. | pt. 2               | 38   | .... | ....      |
| "             | <u>4717</u><br>3  | "                   | " Hall.                        | Pal. N. Y.  | 5, pt. 1            | 299  | 43   | 16        |
| "             | <u>4717</u><br>4  | "                   | " (H. & W.) H.                 | " "         | 5, pt. 1, Pl. & Ex. | .... | 44   | 15        |
| "             | <u>4717</u><br>5  | "                   | "                              | " "         | 5, pt. 1            | .... | 44   | 15        |
| "             | <u>4718</u><br>1  | "                   | hamiltonensis . . H. & W.      | P. N. L. S. | pt. 2               | .... | 36   | ....      |
| "             | <u>4718</u><br>2  | "                   | " Hall.                        | Pal. N. Y.  | 5, pt. 1            | 296  | 43   | 8, 13, 18 |
| "             | <u>4718</u><br>3  | "                   | " (H. & W.) H.                 | " "         | 5, pt. 1            | 296  | 43   | 9-11      |
| "             | <u>4718</u><br>4  | "                   | " " " "                        | " "         | 5, pt. 1            | 296  | 43   | 15        |
| "             | <u>4718</u><br>5  | "                   | " " " "                        | " "         | 5, pt. 1            | 296  | 43   | 21        |
| "             | <u>4719</u><br>1  | Fig'd.              | rugosa (Conrad) . . . Hall.    | " "         | 5, pt. 1            | 297  | 43   | 5         |
| "             | <u>4720</u><br>1  | Type.               | truncata . . . . . Hall.       | " "         | 5, pt. 1, Pl. & Ex. | .... | 44   | 1, 2      |
| "             | <u>4720</u><br>2  | "                   | "                              | " "         | 5, pt. 1            | 298  | 44   | 1, 2      |
| "             | <u>4720</u><br>3  | "                   | "                              | " "         | 5, pt. 1            | 298  | 44   | 3, 5      |



| LOCALITY.             | REMARKS.                                                                           |
|-----------------------|------------------------------------------------------------------------------------|
| .....                 | As <i>Cardiola speciosa</i> .                                                      |
| Ontario Co., N. Y.    | Cast of right valve.                                                               |
| .....                 | As <i>Cardiola speciosa</i> .                                                      |
| Nr. Branchport, N. Y. | Four casts. All the figures are enlargements.                                      |
| Schoharie Co., N. Y.  | Cast of an individual.                                                             |
| Hamilton, N. Y.       | Cast of left valve.                                                                |
| Fultonham, N. Y.      | Exfoliated right valve, imbedded.                                                  |
| Madison Co.? N. Y.    | Cast of right valve.                                                               |
| Sherburne ?, N. Y.    | Cast of left valve.                                                                |
| Summit, N. Y.         | Cast of left valve with greatly extended hinge line. Schoharie Co.                 |
| Cazenovia, N. Y.      | Casts of two individuals.                                                          |
| Nr. Hamilton, N. Y.   | Cast of left valve.                                                                |
| Jefferson, N. Y.      | Cast of left valve retaining small portion of shell.                               |
| Nr. Hamilton, N. Y.   | Casts of two individuals.                                                          |
| " " "                 | Indiv. retaining much of the shell, part of wh. adheres to the matrix.             |
| Onondaga Co., N. Y.   | Upper portion of internal cast of a left valve. From Pratt's Falls.                |
| Nr. Hamilton, N. Y.   | Cast of right valve. The other valve is in the block.                              |
| Otsego Co., N. Y.     | Internal cast of right valve.                                                      |
| Madison Co., N. Y.    | Cast of left valve.                                                                |
| Onondaga Co., N. Y.   | Nearly entire internal cast retaining part of the left valve.                      |
| Falls of Ohio River.  | Cast of left valve.                                                                |
| .....                 | As <i>Actinodesma subrecta</i> .                                                   |
| .....                 | " " "                                                                              |
| Franklin Co., Ohio.   | " " " Imprint of left valve retaining some shell.<br>From Fishinger's quarry.      |
| .....                 | As <i>Sanguinolites acutus</i> .                                                   |
| Canandaigua L., N. Y. | Cast of left valve.                                                                |
| " " "                 | Cast of conjoined valves, somewhat crushed.                                        |
| .....                 | As <i>Cypricardites carinatus</i> .                                                |
| Near Oneonta, N. Y.   | Cast of left valve. The figure on Conrad's plate was reversed in lithographing it. |
| Schoharie Co., N. Y.  | Cast of small left valve.                                                          |
| Oneonta, N. Y.        | Cast of right valve. From Copley's quarry.                                         |
| .....                 | See <i>Goniophora glaucus</i> .                                                    |
| .....                 | As <i>Sanguinolites glaucus</i> .                                                  |
| Cayuga Lake, N. Y.    | Cast of somewhat compressed individual.                                            |
| .....                 | As <i>Goniophora glabra</i> , by error.                                            |
| Kelloggsville, N. Y.  | Cast of elongate left valve.                                                       |
| .....                 | As <i>Sanguinolites hamiltonensis</i> .                                            |
| Fultonham, N. Y.      | Casts of three right valves, one of which (fig. 13) retains some shell.            |
| Schoharie Co., N. Y.  | Cast of three left valves.                                                         |
| Fultonham, N. Y.      | Cast of large individual with expanded valves.                                     |
| Schoharie Co., N. Y.  | Cast of individual with valves partly expanded.                                    |
| Cayuga Lake, N. Y.    | Very perfect cast of large left valve.                                             |
| " " "                 | Crushed cast of individual.                                                        |
| Delphi, N. Y.         | Cast of one right valve and imprint of another.                                    |

## Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.             | GENUS, SPECIES AND AUTHOR.                  | REFERENCE.  |                   |      |       |               |
|---------------|------------------|-------------------------------|---------------------------------------------|-------------|-------------------|------|-------|---------------|
|               |                  |                               |                                             | Work.       | Vol.              | P.   | Pl.   | Figs.         |
| Ham.          | <u>4721</u><br>1 | Type.                         | <b>Gosselettia</b> Barrois.                 |             |                   |      |       |               |
|               |                  | triquetra..... <i>Conrad.</i> | Geol. N. Y.                                 | 1838        | 116               | .... | ..... |               |
| "             | "                | Fig'd.                        | <i>H. &amp; W.</i>                          | P. N. L. S. | pt. 2             | 22   | ....  | .....         |
|               |                  |                               | <i>Hall.</i>                                | Pal. N. Y.  | 5, pt. I          | 265  | 31    | 10            |
| "             | <u>4721</u><br>2 | "                             | " (Con.).... <i>Hall.</i>                   | " "         | 5, pt. I          | 265  | 31    | 9             |
|               |                  |                               | " " " "                                     | " "         | 5, pt. I          | 265  | 31    | 17            |
| "             | <u>4722</u><br>1 | "                             | <b>Grammysia</b> de Verneuil.               |             |                   |      |       |               |
|               |                  |                               | alveata ( <i>Conrad</i> )... <i>Hall.</i>   | " "         | 5, pt. I          | 370  | 60    | 5             |
| "             | <u>4722</u><br>2 | "                             | " " " " " "                                 | " "         | 5, pt. I          | 370  | 60    | 9, 10         |
|               |                  |                               | " " " " " "                                 | " "         | 5, pt. I          | 370  | 57    | I             |
| "             | <u>4722</u><br>3 | "                             | " " " " " "                                 | " "         | 5, pt. I          | 370  | 60    | 11            |
|               |                  |                               | arcuata ( <i>Conrad</i> )... <i>Hall.</i>   | " "         | 5, pt. I, Pl.&Ex. | .... | 61    | 6, 7          |
| "             | <u>4723</u><br>1 | "                             | " " " " " "                                 | " "         | 5, pt. I          | 373  | 61    | 6, 7          |
|               |                  |                               | " " " " " "                                 | " "         | 5, pt. I, Pl.&Ex. | .... | 61    | 8             |
| "             | <u>4723</u><br>1 | "                             | " " " " " "                                 | " "         | 5, pt. I          | 373  | 61    | 8             |
|               |                  |                               | bellatula..... <i>H. &amp; W.</i>           | P. N. L. S. | pt. 2             | 92   | ....  | .....         |
| "             | <u>4724</u><br>1 | Type.                         | <i>Hall.</i>                                | Pal. N. Y.  | 5, pt. I, Pl.&Ex. | .... | 63    | 1-3           |
|               |                  | " " " " " "                   | " "                                         | 5, pt. I    | 367               | 63   | 1-3   |               |
| "             | <u>4725</u><br>1 | Fig'd.                        | bisulcata ( <i>Conrad</i> )... <i>Hall.</i> | " "         | 5, pt. I          | 359  | 54    | 2             |
|               |                  |                               | " " " " " "                                 | " "         | 5, pt. I          | 359  | 54    | 7             |
| "             | <u>4725</u><br>2 | "                             | " " " " " "                                 | " "         | 5, pt. I          | 359  | 54    | 8, 9, 11      |
|               |                  |                               | " " " " " "                                 | " "         | 5, pt. I          | 359  | 54    | 16            |
| "             | <u>4725</u><br>3 | "                             | " " " " " "                                 | " "         | 5, pt. I          | 359  | 54    | I             |
|               |                  |                               | " " " " " "                                 | " "         | 5, pt. I          | 359  | 56    | I             |
| "             | <u>4725</u><br>4 | "                             | " " " " " "                                 | " "         | 5, pt. I          | 359  | 56    | I             |
|               |                  |                               | " " " " " "                                 | " "         | 5, pt. I          | 359  | 56    | I             |
| "             | <u>4725</u><br>5 | "                             | " " " " " "                                 | " "         | 5, pt. I          | 359  | 56    | I             |
|               |                  |                               | " " " " " "                                 | " "         | 5, pt. I          | 359  | 56    | I             |
| "             | <u>4725</u><br>6 | "                             | " " " " " "                                 | N. Y. A. S. | 5                 | 559  | 11    | 19            |
|               |                  |                               | " " " " " "                                 | Geol. O.    | 7                 | 451  | 7     | 19            |
| "             | <u>4726</u><br>1 | Type.                         | circularis..... <i>H. &amp; W.</i>          | P. N. L. S. | pt. 2             | 51   |       |               |
|               |                  | <i>Hall.</i>                  | Pal. N. Y.                                  | 5, pt. I    | 364               | 57   | 3-5   |               |
| Chem.         | <u>4726</u><br>2 | "                             | " (H. & W.) <i>Hall.</i>                    | " "         | 5, pt. I          | 364  | 57    | 6             |
|               |                  |                               | constricta..... <i>H. &amp; W.</i>          | P. N. L. S. | pt. 2             | 58   | ....  | .....         |
| Ham.          | <u>4727</u><br>1 | "                             | <i>Hall.</i>                                | Pal. N. Y.  | 5, pt. I          | 377  | 59    | 14, 15, 20    |
|               |                  |                               | " (H. & W.) <i>Hall.</i>                    | " "         | 5, pt. I          | 377  | 59    | 17            |
| "             | <u>4727</u><br>2 | "                             | " " " " " "                                 | " "         | 5, pt. I, Pl.&Ex. | .... | 78    | 27            |
|               |                  |                               | " " " " " "                                 | " "         | 5, pt. I          | 377  | 78    | 27            |
| Chem.         | <u>4728</u><br>1 | "                             | elliptica..... <i>H. &amp; W.</i>           | P. N. L. S. | pt. 2             | 53   |       |               |
|               |                  |                               | <i>Hall.</i>                                | Pal. N. Y.  | 5, pt. I          | 365  | 58    | 2             |
| "             | <u>4728</u><br>2 | "                             | " (H. & W.) <i>Hall.</i>                    | " "         | 5, pt. I          | 365  | 58    | 4             |
|               |                  |                               | " " " " " "                                 | " "         | 5, pt. I          | 365  | 58    | 3, 5, 6, 8, 9 |
| "             | <u>4728</u><br>3 | "                             | " " " " " "                                 | " "         | 5, pt. I          | 365  | 58    |               |
|               |                  |                               | erecta..... <i>H. &amp; W.</i>              | P. N. L. S. | pt. 2             | 52   |       |               |
| Ham.          | <u>4729</u><br>1 | "                             | <i>Hall.</i>                                | Pal. N. Y.  | 5, pt. I, Pl.&Ex. | .... | 56    | 8             |
|               |                  |                               | " " " " " "                                 | " "         | 5, pt. I          | 363  | 56    | 8             |
| "             | <u>4729</u><br>2 | "                             | " (H. & W.) <i>Hall.</i>                    | " "         | 5, pt. I, Pl.&Ex. | .... | 57    | 10            |
|               |                  |                               | " " " " " "                                 | " "         | 5, pt. I          | 363  | 57    | 10            |
| "             | <u>4730</u><br>1 | "                             | eriopia..... <i>H. &amp; W.</i>             | P. N. L. S. | pt. 2             | 92   | ....  | .....         |
|               |                  |                               | <i>Hall.</i>                                | Pal. N. Y.  | 5, pt. I, Pl.&Ex. | .... | 63    | 7             |
| "             | <u>4730</u><br>1 | "                             | " " " " " "                                 | " "         | 5, pt. I          | 368  | 63    | 7             |
|               |                  |                               | " " " " " "                                 | " "         | 5, pt. I          | 368  | 63    | 7             |
| "             | <u>4731</u><br>1 | "                             | globosa..... <i>H. &amp; W.</i>             | P. N. L. S. | pt. 2             | 57   |       |               |
|               |                  |                               | <i>Hall.</i>                                | Pal. N. Y.  | 5, pt. I, Pl.&Ex. | .... | 62    | 11, 12, 14-19 |
| "             | <u>4731</u><br>1 | "                             | " " " " " "                                 | " "         | 5, pt. I          | 372  | 62    | 11, 12, 14-19 |
|               |                  |                               | " " " " " "                                 | " "         | 5, pt. I          | 372  | 62    | 11, 12, 14-19 |
| "             | <u>4732</u><br>1 | "                             | lirata..... <i>H. &amp; W.</i>              | P. N. L. S. | pt. 2             | 57   |       |               |
|               |                  |                               | <i>Hall.</i>                                | Pal. N. Y.  | 5, pt. I          | 371  | 59    | 7, 12         |
| "             | <u>4732</u><br>2 | "                             | " (H. & W.) <i>Hall.</i>                    | " "         | 5, pt. I          | 371  | 59    | 10            |
|               |                  |                               | " " " " " "                                 | " "         | 5, pt. I          | 371  | 59    | 10            |
| "             | <u>4733</u><br>1 | "                             | magna..... <i>H. &amp; W.</i>               | P. N. L. S. | pt. 2             | 50   |       |               |
|               |                  |                               | <i>Hall.</i>                                | Pal. N. Y.  | 5, pt. I, Pl.&Ex. | .... | 56    | 2, 3          |
| Chem.         | <u>4733</u><br>3 | "                             | " " " " " "                                 | " "         | 5, pt. I          | 362  | 56    | 2, 3          |
|               |                  |                               | " (H. & W.) <i>Hall.</i>                    | " "         | 5, pt. I          | 362  | 56    | 5             |



| LOCALITY.             | REMARKS.                                                                   |
|-----------------------|----------------------------------------------------------------------------|
| .....                 | As <i>Pterinea triqueter</i> .                                             |
| .....                 | " <i>Mytilarca triqueter</i> .                                             |
| Oneonta, N. Y.        | Cast of very ventricose individual supposed to be Conrad's orig. type.     |
| " "                   | Cast of left valve.                                                        |
| Madison Co., N. Y.    | Cast of right valve.                                                       |
| Schoharie Co., N. Y.  | Most probably a vertically crushed specimen of <i>Grammysia lirata</i> .   |
| Warnersville, N. Y.   | Internal cast of large individual.                                         |
| Nr. Sherburne, N. Y.  | Vertically compressed cast of individual.                                  |
| .....                 | As <i>Grammysia (Leptodomus?) arcuata</i> .                                |
| Schoharie Co., N. Y.  | Cast of individual.                                                        |
| .....                 | As <i>Grammysia (Leptodomus?) arcuata</i> .                                |
| Nr. Fultonham, N. Y.  | Cast of right valve.                                                       |
| .....                 | As <i>Cardiomorpha bellatula</i> .                                         |
| .....                 | " " "                                                                      |
| York Centre, N. Y.    | Casts of two opposite valves in same block.                                |
| Schoharie Co., N. Y.  | Cast of right valve. From "Bear's Gulf."                                   |
| Hamilton, N. Y.       | Cast of an individual, laterally compressed.                               |
| Madison Co., N. Y.    | Casts of two individuals.                                                  |
| Fultonham, N. Y.      | Cast of pair of expanded valves.                                           |
| Ludlowville, N. Y.    | Cast of pair of expanded valves.                                           |
| Near Columbus, O.     | Cast of right valve.                                                       |
| Blenheim, N. Y.       | Cast of pair of expanded valves and one of an individual.                  |
| Ithaca, N. Y.         | Cast of individual somewhat crushed, not entire.                           |
| .....                 | As <i>Grammysia (Leptodomus?) constricta</i> .                             |
| Seneca Lake, N. Y.    | Compressed casts of a right valve and of an individual.                    |
| Ludlowville, N. Y.    | Cast of left valve.                                                        |
| .....                 | As <i>Pholadella constricta</i> .                                          |
| Otsego Co., N. Y.     | Cast of right valve.                                                       |
| Belvidere, N. Y.      | Cast of left valve.                                                        |
| Ithaca, N. Y.         | Cast of individual. From McCormack's quarry.                               |
| Belmont, N. Y.        | Casts of one right and three left valves.                                  |
| .....                 | As <i>Grammysia magna</i> , by error.                                      |
| Fultonham, N. Y.      | Imperfect cast of right valve.                                             |
| .....                 | As <i>Grammysia magna</i> , by error.                                      |
| Near Fultonham, N. Y. | Umbonal part of cast of right valve. From "Bear's Gulf"?                   |
| .....                 | As <i>Cardiomorpha eriopia</i> .                                           |
| .....                 | " " "                                                                      |
| Seneca Lake, N. Y.    | Cast of right valve.                                                       |
| .....                 | As types of <i>Cardiomorpha cordatus</i> Hall.                             |
| Near Hamilton, N. Y.  | Casts of three pairs of conjoined valves.                                  |
| Schoharie Co., N. Y.  | Casts of two individs. Fig. 12 prob. of a young <i>Grammysia alveata</i> . |
| Fultonham, N. Y.      | Cast of an individual, vertically compressed, incomplete.                  |
| Fultonham, N. Y.      | As <i>Grammysia nodocostata?</i> Cast, entire.                             |
| Ithaca, N. Y.         | Cast of individual somewhat compressed laterally and not quite entire.     |

## Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.      | REFERENCE.  |                   |      |      |            |
|---------------|------------------|-------------------|---------------------------------|-------------|-------------------|------|------|------------|
|               |                  |                   |                                 | Work.       | Vol.              | P.   | Pl.  | Figs.      |
|               |                  |                   | <b>Grammysia</b> de Vern.—Cont. |             |                   |      |      |            |
| Ham.          | $\frac{4733}{2}$ | Type.             | magna..(H. & W.) Hall.          | Pal. N. Y.  | 5, pt. I          | 362  | 56   | 6          |
| "             | $\frac{4734}{1}$ | "                 | nodocostata....H. & W. Hall.    | P. N. L. S. | pt. 2             | 50   |      |            |
| "             | "                | "                 | " (H. & W.) Hall.               | Pal. N. Y.  | 5, pt. I          | 360  | 55   | 1, 5, 6    |
| "             | "                | "                 | " (H. & W.) Hall.               | "           | 5, pt. I          | 360  | 55   | 7-9        |
| "             | $\frac{4735}{1}$ | "                 | obsoleta.....H. & W. Hall.      | P. N. L. S. | pt. 2             | 60   |      |            |
| "             | "                | "                 | " (H. & W.) Hall.               | Pal. N. Y.  | 5, pt. I          | 366  | 59   | 21-23      |
| "             | $\frac{4735}{2}$ | "                 | " (H. & W.) Hall.               | "           | 5, pt. I          | 366  | 59   | 24, 27     |
| "             | $\frac{4735}{3}$ | "                 | " " " "                         | "           | 5, pt. I          | 366  | 59   | 25         |
| U. H.         | $\frac{4219}{1}$ | "                 | secunda.. ....H. & W. Hall.     | P. N. L. S. | pt. 2             | 54   |      |            |
| Chem.         | $\frac{4736}{1}$ | "                 | subarcuata ....H. & W. Hall.    | Pal. N. Y.  | 5, pt. I          | 376  | 59   | 2, 3       |
| "             | "                | "                 | " " " "                         | P. N. L. S. | pt. 2             | 61   |      |            |
| "             | "                | "                 | " " " "                         | Pal. N. Y.  | 5, pt. I, Pl.&Ex. | .... | 61   | 10, 16, 17 |
| "             | $\frac{4736}{2}$ | "                 | " (H. & W.) Hall.               | "           | 5, pt. I          | 375  | 61   | 10, 16, 17 |
| "             | "                | "                 | " " " "                         | "           | 5, pt. 5, Pl.&Ex. | .... | 61   | 12         |
| "             | $\frac{4736}{1}$ | "                 | " " " "                         | "           | 5, pt. I          | 375  | 61   | 12         |
| "             | "                | "                 | " " " "                         | "           | 5, pt. I, Pl.&Ex. | .... | 61   | 13, 14, 21 |
| "             | "                | "                 | " " " "                         | "           | 5, pt. I          | 375  | 61   | 13, 14, 21 |
| "             | $\frac{4736}{3}$ | "                 | " " " "                         | "           | 5, pt. I, Pl.&Ex. | .... | 61   | 15         |
| "             | "                | "                 | " " " "                         | "           | 5, pt. I          | 375  | 61   | 15         |
| "             | $\frac{4737}{1}$ | "                 | undata.....Hall.                | "           | 5, pt. I          | 379  | 61   | 23         |
| "             | "                | "                 | " " " "                         | "           | 5, pt. I, Pl.&Ex. | .... | 61   | 23         |
| Ham.          | $\frac{4738}{1}$ | "                 | zonata.....Hall.                | "           | 5, pt. I, Pl.&Ex. | .... | 63   | 5          |
| "             | "                | "                 | " " " "                         | "           | 5, pt. I          | 373  | 63   | 5          |
| "             | $\frac{4738}{2}$ | "                 | " " " "                         | "           | 5, pt. I, Pl.&Ex. | .... | 63   | 4          |
| "             | "                | "                 | " " " "                         | "           | 5, pt. I          | 373  | 63   | 4          |
| "             | "                | "                 | (Sphenomya)                     |             |                   |      |      |            |
| "             | $\frac{4739}{1}$ | "                 | cuneata.....Hall.               | "           | 5, pt. I, Pl.&Ex. | .... | 62   | 3          |
| "             | "                | "                 | " " " "                         | "           | 5, pt. I          | 383  | 62   | 3          |
| "             | $\frac{4739}{2}$ | "                 | " " " "                         | "           | 5, pt. I          | 383  | 62   | 6, 7       |
| "             | "                | "                 | <b>Leda</b> Schumacher.         |             |                   |      |      |            |
| "             | $\frac{4740}{1}$ | "                 | brevirostris....H. & W. Hall.   | P. N. L. S. | pt. 2             | 6    | .... | ....       |
| "             | "                | "                 | " " " "                         | Pal. N. Y.  | 5, pt. I, Pl.&Ex. | .... | 47   | 38, 39     |
| "             | "                | "                 | " " " "                         | "           | 5, pt. I          | 329  | 47   | 38, 39     |
| "             | $\frac{4741}{1}$ | "                 | diversa.....Hall.               | "           | 5, pt. I, Pl.&Ex. | .... | 47   | 31         |
| "             | "                | "                 | " " " "                         | "           | 5, pt. I          | 329  | 47   | 31         |
| "             | "                | "                 | <b>Leiopteria</b> Hall.         |             |                   |      |      |            |
| "             | $\frac{4742}{1}$ | "                 | Bigsbyi.....Hall.               | Pal. N. Y.  | 5, pt. I, Pl.&Ex. | .... | 20   | 3          |
| "             | "                | "                 | " " " "                         | N. Y. S. M. | 35                | 340  |      |            |
| "             | "                | "                 | " " " "                         | Pal. N. Y.  | 5, pt. I          | 165  | 20   | 3          |
| "             | $\frac{4743}{1}$ | "                 | Conradi.....Hall.               | "           | 5, pt. I, Pl.&Ex. | .... | 20   | 4          |
| "             | "                | "                 | " " " "                         | N. Y. S. M. | 35                | 335  |      |            |
| "             | "                | "                 | " " " "                         | Pal. N. Y.  | 5, pt. I          | 159  | 20   | 4          |
| "             | "                | "                 | " " " "                         | "           | "                 | "    | 88   | 3          |
| "             | $\frac{4744}{1}$ | "                 | Greeni.....Hall.                | "           | 5, pt. I, Pl.&Ex. | .... | 20   | 12         |
| "             | "                | "                 | " " " "                         | N. Y. S. M. | 35                | 336  |      |            |
| "             | "                | "                 | " " " "                         | Pal. N. Y.  | 5, pt. I          | 160  | 20   | 12         |



| LOCALITY.              | REMARKS.                                                                                                                                                  |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| ? , New York.          | Cast of left valve. See also <i>Grammysia erecta</i> .                                                                                                    |
| Madison Co., N. Y.     | Casts of pair of expanded valves and of an entire individual.                                                                                             |
| “ “ “                  | Cast of indiv., vertically compressed. See also <i>Grammysia magna</i> .                                                                                  |
| Cazenovia, N. Y.       | Cast of individual.                                                                                                                                       |
| Nr. Fultonham, N. Y.   | Cast of left valve.                                                                                                                                       |
| Schoharie Co., N. Y.   | Cast of pair of expanded valves.                                                                                                                          |
| Clarence Hollow, N.Y.  | Cast of individual.                                                                                                                                       |
| .....                  | As <i>Grammysia (Leptodomus?) subarcuata</i> .                                                                                                            |
| Near Elmira, N. Y.     | Two casts of individ., somewhat crushed. From Handy's quarry.                                                                                             |
| .....                  | As <i>Grammysia (Leptodomus?) subarcuata</i> .                                                                                                            |
| Chemung, N. Y.         | Cast of left valve.                                                                                                                                       |
| .....                  | As <i>Grammysia (Leptodomus?) subarcuata</i> .                                                                                                            |
| Near Elmira, N. Y.     | Two casts of individuals, one compressed laterally, the other vertically. Umbo restored in fig. 21.                                                       |
| .....                  | As <i>Grammysia (Leptodomus?) subarcuata</i> .                                                                                                            |
| Near Elmira, N. Y.     | Cast of right valve and its imprint. The figure is a combination of the features shown in both. From Buck's quarry.                                       |
| Near Panama, N. Y.     | As <i>Grammysia (Leptodomus?) hannibalensis</i> Shumard. Cast of left valve.                                                                              |
| .....                  | As <i>Cardiomorpha zonata</i> .                                                                                                                           |
| Western New York.      | Cast of pair of expanded valves.                                                                                                                          |
| Schoharie Co., N. Y.   | As <i>Cardiomorpha concentrica</i> .                                                                                                                      |
| .....                  | Cast of left valve. Figure is an enlargement to two diameters.                                                                                            |
| .....                  |                                                                                                                                                           |
| New Berlin, N. Y.      | Cast of right valve, somewhat compressed vertically.                                                                                                      |
| Nr. Fultonham, N. Y.   | Casts of two individuals, nearly entire.                                                                                                                  |
| .....                  | Generic reference queried.                                                                                                                                |
| .....                  | As <i>Leda (Nuculana) brevirostris</i> .                                                                                                                  |
| Jefferson, N. Y.       | Casts of two left valves in the block with <i>Actinopteria Boydi</i> , figs. 8, 15, pl. 19, and <i>Nuculites cuneiformis</i> , fig. 16, pl. 47, same vol. |
| .....                  | As <i>Leda (Nuculana) diversa</i> .                                                                                                                       |
| Canandaigua L., N. Y.  | Cast of right valve.                                                                                                                                      |
| .....                  |                                                                                                                                                           |
| Smyrna, N. Y.          | Cast of left valve on the block with <i>Tellinopsis subemarginata</i> , fig. 23, pl. 76, same volume.                                                     |
| .....                  |                                                                                                                                                           |
| Skaneateles L. ?, N.Y. | Cast of left valve.                                                                                                                                       |
| .....                  |                                                                                                                                                           |
| Catherine Tp., N. Y.   | Partly exfoliated left valve, imbedded. Found loose.                                                                                                      |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.           | REFERENCE.  |                   |       |         |             |
|---------------|------------------|-------------------|--------------------------------------|-------------|-------------------|-------|---------|-------------|
|               |                  |                   |                                      | Work.       | Vol.              | P.    | Pl.     | Figs.       |
| Mar.          | $\frac{4390}{1}$ | Type.             | <b>Leiopteria</b> Hall— <i>Cont.</i> |             |                   |       |         |             |
|               |                  |                   | laevis.....Hall.                     | Geol. N. Y. | 4th D.            | 181   | ct. 71  | 6           |
|               |                  |                   | (Hall) Miller.                       | Am. P. F.   | .....             | 202   | .....   | .....       |
|               |                  |                   | Hall.                                | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | ..... | 17      | 10          |
| " "           | " "              | " "               | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
| Ham.          | $\frac{4745}{1}$ | " "               | Mitchelli.....Hall.                  | " "         | 5, pt. 1, Pl.&Ex. | ..... | 20      | 8           |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
| U.H.          | $\frac{4208}{1}$ | " "               | Rafinesquii.....Hall.                | " "         | 5, pt. 1, Pl.&Ex. | ..... | 15      | 11          |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
| Chem.         | $\frac{4746}{1}$ | " "               | <b>Leptodesma</b> Hall.              |             |                   |       |         |             |
|               |                  |                   | acanthopterum.....Hall.              | Geol. N. Y. | 4th D.            | 264   | ct. 118 | 2           |
|               |                  |                   | " .....                              | " "         | 5, pt. 1, Pl.&Ex. | ..... | 21      | 40          |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
| " "           | $\frac{4747}{1}$ | " "               | aliforme.....Hall.                   | " "         | 5, pt. 1, Pl.&Ex. | ..... | 22      | 28          |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
| " "           | $\frac{4748}{1}$ | " "               | Becki.....Hall.                      | " "         | 5, pt. 1, Pl.&Ex. | ..... | 22      | 3, 5        |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
| " "           | $\frac{4749}{1}$ | " "               | complanatum.....Hall.                | " "         | 5, pt. 1, Pl.&Ex. | ..... | 22      | 2           |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
| " "           | $\frac{4749}{2}$ | " "               | " .....                              | " "         | 5, pt. 1, Pl.&Ex. | ..... | 41      | 12          |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
| " "           | $\frac{4874}{1}$ | " "               | extenuatum.....Hall.                 | " "         | 5, pt. 1, Pl.&Ex. | ..... | 22      | 23          |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
| Chem.         | $\frac{4750}{1}$ | Type.             | lepidum Hall.....                    |             |                   |       |         |             |
|               |                  |                   | lichas.....Hall.                     | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | ..... | 21      | 35,36,38,39 |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
| " "           | $\frac{4751}{1}$ | " "               | longispina.....Hall.                 | Geol. N. Y. | 4th D.            | 263   | ct. 117 | 3           |
|               |                  |                   | (Hall) Miller.                       | Am. P. F.   | .....             | 202   | .....   | .....       |
|               |                  |                   | Hall.                                | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | ..... | 21      | 14          |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
| " "           | " "              | " "               | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
| Mar.          | $\frac{4752}{1}$ | " "               | marcellense.....Hall.                | " "         | 5, pt. 1, Pl.&Ex. | ..... | 17      | 12          |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
| Chem.         | $\frac{4753}{1}$ | " "               | naviforme.....Hall.                  | " "         | 5, pt. 1, Pl.&Ex. | ..... | 22      | 15          |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
| " "           | " "              | " "               | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |
|               |                  |                   | " .....                              | " "         | " "               | " "   | " "     | " "         |



| LOCALITY.              | REMARKS.                                                                                  |
|------------------------|-------------------------------------------------------------------------------------------|
| .....                  | As <i>Avicula lævis</i> .                                                                 |
| .....                  | Referred to genus <i>Pteronites</i> .                                                     |
| .....                  | As <i>Leiopteria lævis</i> .                                                              |
| East Bloomfield, N. Y. | A nearly entire left valve, imbedded.                                                     |
| “ “ “                  | Cast of left valve.                                                                       |
| Catherine Tp., N. Y.   | Cast of left valve. Found loose.                                                          |
| Delaware, O.           | Cast of small left valve.                                                                 |
| .....                  | As <i>Avicula acanthoptera</i> .                                                          |
| .....                  | “ type of <i>Leptodesma lepidum</i> .                                                     |
| .....                  | “ “ “ “ “                                                                                 |
| Belmont, N. Y.         | “ “ “ “ “ Nearly entire cast and the imprint<br>of the left valve of the same individual. |
| Near Angelica, N. Y.   | Cast of right valve. From “Hull’s Mill.”                                                  |
| Corning, N. Y.         | Casts of two opposite valves in the same block.                                           |
| Belmont, N. Y.         | Cast of left valve.                                                                       |
| .....                  | As <i>Modiomorpha neglecta</i> , by error.                                                |
| Steuben Co., N. Y.     | Cast of left valve.                                                                       |
| Belmont, N. Y.         | Cast of left valve.                                                                       |
| .....                  | Founded upon the type specimen of <i>Leptodesma acanthopterum</i> , q.v.                  |
| Belmont, N. Y.         | Casts of three left valves and a right valve.                                             |
| .....                  | As <i>Avicula longispina</i> .                                                            |
| .....                  | Referred to genus <i>Pterinea</i> .                                                       |
| Painted Post, N. Y.    | Cast of large left valve.                                                                 |
| “ “ “                  | Casts of three right valves.                                                              |
| E. Bloomfield, N. Y.   | Left valve, imbedded.                                                                     |
| Near Ithaca, N. Y.     | Cast of left valve.                                                                       |
| “ “ “                  | Cast of right valve.                                                                      |

## Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv.    | Cat. No.            | Type or Fig'd Sp.                              | GENUS, SPECIES AND AUTHOR.                 | REFERENCE.              |                   |         |             |            |       |
|------------------|---------------------|------------------------------------------------|--------------------------------------------|-------------------------|-------------------|---------|-------------|------------|-------|
|                  |                     |                                                |                                            | Work.                   | Vol.              | P.      | Pl.         | Figs.      |       |
| Chem.            | <u>4754</u><br>1    | Type.                                          | <b>Leptodesma</b> Hall— <i>Cont.</i>       |                         |                   |         |             |            |       |
|                  |                     |                                                | potens . . . . . Hall.                     | Pal. N. Y.              | 5, pt. 1, Pl.&Ex. |         | 22          | 21         |       |
|                  | <u>4755</u><br>1    | Fig'd.                                         | "                                          | N. Y. S. M.             | 35                | 358     |             |            |       |
|                  |                     |                                                | protextum ( <i>Conrad</i> ) Hall.          | Pal. N. Y.              | 5, pt. I          | 188     | 22          | 21         |       |
|                  | <u>4756</u><br>1    | Type.                                          | robustum . . . . . Hall.                   | "                       | 5, pt. I          | 183     | 21          | 22, 23     |       |
|                  |                     |                                                | "                                          | "                       | 5, pt. 1, Pl.&Ex. |         | 21          | 15, 16, 20 |       |
|                  | <u>4757</u><br>1    | Fig'd.                                         | "                                          | N. Y. S. M.             | 35                | 352     |             |            |       |
|                  |                     |                                                | sociale? . . . . . Hall.                   | Pal. N. Y.              | 5, pt. I          | 181     | 21          | 15, 16, 20 |       |
|                  | <u>4758</u><br>1    | "                                              | "                                          | "                       | 5, pt. 1, Pl.&Ex. |         | 21          | 33, 34     |       |
|                  |                     |                                                | "                                          | N. Y. S. M.             | 35                | 357     |             |            |       |
| <u>4759</u><br>1 | "                   | "                                              | Pal. N. Y.                                 | 5, pt. I                | 187               | 21      | 33, 34      |            |       |
|                  |                     | spinigerum ( <i>Con.</i> ) . . Hall.           | "                                          | 5, pt. I                | 177               | 21      | 10-13       |            |       |
| Ham.             | <u>4760</u><br>1    | Type.                                          | sp. indet. . . . . Hall.                   | "                       | 5, pt. I          |         | 22          | I          |       |
|                  |                     |                                                | <b>Lima</b> Bruguière.                     |                         |                   |         |             |            |       |
|                  | <u>4761</u><br>1    | "                                              | <i>glaber</i> . . . . .                    |                         |                   |         |             |            |       |
|                  |                     |                                                | <i>macroptera</i> . . . . .                |                         |                   |         |             |            |       |
|                  | <u>4762</u><br>1    | Gen. and Sp. Type.                             | <i>obsoleta</i> . . . . .                  |                         |                   |         |             |            |       |
|                  |                     |                                                | <i>rugæstriata</i> . . . . .               |                         |                   |         |             |            |       |
|                  | <u>4763</u><br>1    | Type.                                          | <b>Limoptera</b> H. & W.                   |                         |                   |         |             |            |       |
|                  |                     |                                                | cancellata . . . . . H. & W. Hall.         | P. N. L. S. Pal. N. Y.  | pt. 2 5, pt. I    | 16 244  |             | 26 92      | I-4 3 |
|                  | <u>4764</u><br>1    | "                                              | curvata . . . . . H. & W. Hall.            | P. N. L. S. Pal. N. Y.  | pt. 2 5, pt. I    | 18 250  |             | 28         | I-3   |
|                  |                     |                                                | macroptera . . . . . Conrad. H. & W. Hall. | Geol. N. Y. P. N. L. S. | 1838 pt. 2        | 117 17  |             |            |       |
| <u>4765</u><br>1 | Fig'd Sp. and G. T. | " ( <i>Conrad</i> ) Hall.                      | Pal. N. Y.                                 | 5, pt. I                | 246               | 27      | 4, 5, 10    |            |       |
|                  |                     | "                                              | "                                          | 5, pt. I                | 246               | 26      | 6-9         |            |       |
| <u>4766</u><br>1 | "                   | "                                              | "                                          | "                       | "                 | 29      | I           |            |       |
|                  |                     | "                                              | "                                          | 5, pt. I                | 246               | 27      | 1, 8        |            |       |
| <u>4767</u><br>1 | "                   | "                                              | "                                          | "                       | "                 | 27      | 2           |            |       |
|                  |                     | "                                              | "                                          | 5, pt. I                | 246               | 27      | 6, 7        |            |       |
| <u>4768</u><br>1 | "                   | "                                              | "                                          | "                       | "                 | 27      | 9           |            |       |
|                  |                     | "                                              | "                                          | 5, pt. I                | 246               | 27      | 4           |            |       |
| <u>4769</u><br>1 | "                   | "                                              | "                                          | "                       | "                 | 28      | 2           |            |       |
|                  |                     | "                                              | "                                          | 5, pt. I                | 246               | 28      | 5           |            |       |
| <u>4770</u><br>1 | Type.               | obsoleta . . . . . H. & W. Hall.               | P. N. L. S. Pal. N. Y.                     | pt. 2 5, pt. I          | 18 249            |         | 29          | 5          |       |
|                  |                     | " ( <i>H. &amp; W.</i> ) Hall.                 | "                                          | 5, pt. I                | 249               | 29      | 6           |            |       |
| <u>3095</u><br>1 | "                   | pauperata . . . . . H. & W. Hall.              | P. N. L. S. Pal. N. Y.                     | pt. 2 5, pt. I          | 16 243            |         | 26          | 5          |       |
|                  |                     | <b>Lucina</b> Bruguière.                       |                                            |                         |                   |         |             |            |       |
| <u>4771</u><br>1 | Type.               | <i>elliptica</i> , var. <i>occidentalis</i> .. |                                            |                         |                   |         |             |            |       |
|                  |                     | <b>Lunulicardium</b> Münster.                  |                                            |                         |                   |         |             |            |       |
| <u>4772</u><br>1 | Type.               | <i>acutirostrum</i> . . . . .                  |                                            |                         |                   |         |             |            |       |
|                  |                     | fragile . . . . . Hall.                        | Pal. N. Y.                                 | 5, pt. I                | 434               | 71      | 4, 5, 7, 10 |            |       |
| <u>4773</u><br>1 | "                   | "                                              | "                                          | 5, pt. I                | 434               | 71      | 12          |            |       |
|                  |                     | "                                              | "                                          | 5, pt. I                | 434               | 71      | 13, 14      |            |       |
| <u>4397</u><br>1 | "                   | orbiculare . . . . . Hall.                     | "                                          | 5, pt. I                | 436               | 71      | 24          |            |       |
|                  |                     | "                                              | "                                          | 5, pt. 1, Pl.&Ex.       |                   | 71      | 24          |            |       |
| <u>4774</u><br>1 | "                   | ornatum . . . . . Hall.                        | Geol. N. Y.                                | 4th D.                  | 244               | ct. 106 | 8           |            |       |
|                  |                     | "                                              | Pal. N. Y.                                 | 5, pt. I                | 437               | 71      | 28, 29      |            |       |
| <u>4775</u><br>1 | "                   | "                                              | "                                          | 5, pt. I                | 437               | 71      | 26          |            |       |
|                  |                     | "                                              | Geol. N. Y.                                | 4th D.                  | 244               | ct. 106 | 7           |            |       |
| <u>4776</u><br>1 | "                   | "                                              | Pal. N. Y.                                 | 5, pt. 1, Pl.&Ex.       |                   | 71      | 30, 32      |            |       |
|                  |                     | "                                              | "                                          | 5, pt. I                | 437               | 71      | 30, 32      |            |       |



| LOCALITY.                                      | REMARKS.                                                                                                                              |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Nr. Casadaga L., N. Y.<br>Chemung River, N. Y. | Somewhat worn cast of left valve. From 3½ miles east of lake.<br>Casts of two opp. valves in block with others. From "Upper Narrows." |
| Painted Post, N. Y.                            | Casts of one right and two left valves.                                                                                               |
| Nanticoke, N. Y.                               | Casts of two right valves and a left valve in same block. "Referred to this species with some doubt."                                 |
| Painted Post, N. Y.<br>Ithaca, N. Y.           | Casts of four left valves.<br>Weathered cast of right valve.                                                                          |
| .....                                          | See <i>Crenipecten glaber</i> .                                                                                                       |
| .....                                          | " <i>Limoptera macroptera</i> .                                                                                                       |
| .....                                          | " <i>Crenipecten obsoletus</i> .                                                                                                      |
| .....                                          | " <i>Aviculopecten rugistriatus</i> .                                                                                                 |
| Falls of Ohio River.                           | Cast of individual.                                                                                                                   |
| Madison Co., N. Y.<br>.....                    | Casts of an individual and a left valve.<br>As <i>Lima macroptera</i> .                                                               |
| Cazenovia, N. Y.                               | Cast of individual, not quite entire along hinge line.                                                                                |
| " "                                            | Casts of two left valves and of two individuals.                                                                                      |
| Madison Co., N. Y.                             | Imprint of right valve and cast of individual.                                                                                        |
| Summit, N. Y.                                  | Cast of left valve. Schoharie county.                                                                                                 |
| Near Cazenovia, N. Y.                          | Cast of an individual.                                                                                                                |
| Madison Co., N. Y.<br>" " "                    | Somewhat distorted cast of individual.<br>Cast of individual retaining small portions of shell.                                       |
| Hamilton, N. Y.                                | Cast of individual.                                                                                                                   |
| Cayuga Lake, N. Y.                             | Cast of large left valve.                                                                                                             |
| Stafford, N. Y.                                | An imperfect cast of left valve.                                                                                                      |
| .....                                          | See <i>Paracyclas elliptica</i> .                                                                                                     |
| .....                                          | See <i>Lunulicardium ornatum</i> .                                                                                                    |
| Genesee Valley, N. Y.                          | Four specimens, casts.                                                                                                                |
| S. of Buffalo, N. Y.                           | Cast of left valve. From Seneca creek.                                                                                                |
| Penn Yan, N. Y.                                | Cast of left valve and imprint of two valves.                                                                                         |
| Bloomfield, N. Y.                              | As <i>Lunulicardium ornatum</i> ? Imprint of left valve.                                                                              |
| .....                                          | As <i>Pinnopsis ornatus</i> .                                                                                                         |
| Cashaqua Creek, N. Y.                          | Cast of left valve. From the Shakers' mill near Lake Erie.                                                                            |
| Near Elmira, N. Y.                             | Cast of right valve.                                                                                                                  |
| .....                                          | As <i>Pinnopsis acutirostra</i> , generic and specific type.                                                                          |
| .....                                          | " <i>Lunulicardium acutirostrum</i> .                                                                                                 |
| Cashaqua Creek, N. Y.                          | Two casts in same block. See also <i>Lunulicardium orbiculare</i> .                                                                   |

## Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.    | REFERENCE.  |                     |       |        |           |
|---------------|------------------|-------------------|-------------------------------|-------------|---------------------|-------|--------|-----------|
|               |                  |                   |                               | Work.       | Vol.                | P.    | Pl.    | Figs.     |
| Chem.         | $\frac{4766}{1}$ | Type.             | <b>Lyriopecten</b> Hall.      |             |                     |       |        |           |
|               |                  |                   | anomiiformis (H.) Miller.     | Am. P. F.   | .....               | 193   | .....  | .....     |
|               |                  |                   | Hall.                         | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | ..... | 4      | 10        |
|               |                  |                   | "                             | N. Y. S. M. | 35                  | 255   |        |           |
| "             | $\frac{4766}{2}$ | "                 | "                             | Pal. N. Y.  | 5, pt. 1            | 53    | 4      | 10        |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
| "             | $\frac{4767}{1}$ | "                 | cymbalon . . . . . Hall.      | "           | 5, pt. 1, Pl. & Ex. | ..... | 24     | 8         |
|               |                  |                   | "                             | N. Y. S. M. | 35                  | 251   |        |           |
|               |                  |                   | "                             | Pal. N. Y.  | 5, pt. 1            | 47    | 24     | 8         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
| Ham.          | $\frac{4768}{1}$ | "                 | interradiatus . . . . . Hall. | "           | 5, pt. 1, Pl. & Ex. | ..... | 2      | 1-4       |
|               |                  |                   | "                             | N. Y. S. M. | 35                  | 248   |        |           |
|               |                  |                   | "                             | Pal. N. Y.  | 5, pt. 1            | 44    | 2      | 1-4       |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
| "             | $\frac{4769}{1}$ | "                 | macrodon (H.) Miller.         | Am. P. F.   | .....               | 193   | .....  | .....     |
|               |                  |                   | Hall.                         | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | ..... | 4      | 9         |
|               |                  |                   | "                             | N. Y. S. M. | 35                  | 250   |        |           |
|               |                  |                   | "                             | Pal. N. Y.  | 5, pt. 1            | 46    | 4      | 9         |
| "             | $\frac{4770}{1}$ | "                 | orbiculatus . . . . . Hall.   | Geol. N. Y. | 4th D.              | 202   | ct. 81 | 1         |
|               |                  |                   | "                             | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | ..... | 4      | 4         |
|               |                  |                   | "                             | N. Y. S. M. | 35                  | 247   |        |           |
|               |                  |                   | "                             | Pal. N. Y.  | 5, pt. 1            | 42    | 4      | 4         |
| "             | $\frac{4770}{2}$ | "                 | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
| "             | $\frac{4770}{3}$ | "                 | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
| "             | $\frac{4770}{4}$ | "                 | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
| Scho.         | $\frac{2841}{1}$ | "                 | parallelodontus (H.) Miller.  | Am. P. F.   | .....               | 193   | .....  | .....     |
|               |                  |                   | Hall.                         | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | ..... | 4      | 1, 2      |
|               |                  |                   | "                             | N. Y. S. M. | 35                  | 245   |        |           |
|               |                  |                   | "                             | Pal. N. Y.  | 5, pt. 1            | 40    | 4      | 1, 2      |
| Chem.         | $\frac{4771}{1}$ | "                 | polydorus . . . . . Hall.     | "           | 5, pt. 1, Pl. & Ex. | ..... | 7      | 25        |
|               |                  |                   | "                             | N. Y. S. M. | 35                  | 253   |        |           |
|               |                  |                   | "                             | Pal. N. Y.  | 5, pt. 1            | 50    | 7      | 25        |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
| "             | $\frac{4772}{1}$ | "                 | priamus . . . . . Hall.       | "           | 5, pt. 1, Pl. & Ex. | ..... | 10     | 1         |
|               |                  |                   | "                             | N. Y. S. M. | 35                  | 256   |        |           |
|               |                  |                   | "                             | Pal. N. Y.  | 5, pt. 1            | 54    | 10     | 1         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
| "             | $\frac{4773}{1}$ | Fig'd.            | tricostatus (Vanux.) Hall.    | "           | 5, pt. 1, Pl. & Ex. | ..... | 7      | 26        |
|               |                  |                   | "                             | N. Y. S. M. | 35                  | 252   |        |           |
|               |                  |                   | "                             | Pal. N. Y.  | 5, pt. 1            | 48    | 7      | 26        |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
| "             | $\frac{4773}{2}$ | "                 | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
| "             | $\frac{4773}{1}$ | "                 | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
| "             | $\frac{4773}{3}$ | "                 | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
| "             | $\frac{4774}{1}$ | Type.             | <b>Macrodon</b> Lycett.       |             |                     |       |        |           |
|               |                  |                   | chemungensis . . H. & W.      | P. N. L. S. | pt. 2               | 14    |        |           |
|               |                  |                   | Hall.                         | Pal. N. Y.  | 5, pt. 1            | 350   | 51     | 11, 13-15 |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
| "             | $\frac{4775}{1}$ | "                 | hamiltoniae . . . . H. & W.   | P. N. L. S. | pt. 2               | 13    |        |           |
|               |                  |                   | Hall.                         | Pal. N. Y.  | 5, pt. 1            | 349   | 51     | 1         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
| U. H.         | $\frac{3097}{1}$ | "                 | <b>Megambonia</b> Hall.       |             |                     |       |        |           |
|               |                  |                   | cardiiformis . . . . . Hall.  | Geol. N. Y. | 4th D.              | 173   | ct 68  | 1         |
|               |                  |                   | "                             | N. Y. S. M. | 12                  | 13    | .....  | .....     |
|               |                  |                   | "                             | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | ..... | 52     | 2, 5, 6   |
| "             | $\frac{3097}{1}$ | "                 | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |
|               |                  |                   | "                             | "           | "                   | "     | "      | "         |



| LOCALITY.                    | REMARKS.                                                                                 |
|------------------------------|------------------------------------------------------------------------------------------|
| .....                        | <i>Nomen nudum.</i>                                                                      |
| Chemung Upper Narrows, N. Y. | Cast of right valve.                                                                     |
| Chemung Creek, N. Y.         | Somewhat flattened cast of left valve.                                                   |
| Near Elmira, N. Y.           | Very perfect cast of left valve.                                                         |
| Fultonham, N. Y.             | Casts of two individuals and the imprint of the right valve of each, somewhat imperfect. |
| .....                        | <i>Nomen nudum.</i>                                                                      |
| Worcester, N. Y.             | Imperfect internal cast of left valve.                                                   |
| .....                        | As <i>Avicula orbiculata</i> .                                                           |
| Lake Erie, N. Y.             | An exfoliated left valve, imbedded.                                                      |
| Seneca Lake, N. Y.           | Cast of left valve showing hinge line in part. From "Baileytown."                        |
| York Centre, N. Y.           | Two conjoined valves, somewhat imperfect.                                                |
| Canandaigua L., N. Y.        | Cast of left valve retaining small bits of the shell.                                    |
| .....                        | <i>Nomen nudum.</i>                                                                      |
| Albany Co., N. Y.            | The cast and the corresponding imprint of right valve. From Thompson's Lake.             |
| Nr. Casadaga L., N. Y.       | Cast of a right valve. From 3½ miles east of the lake.                                   |
| Franklin, N. Y.              | Cast of left valve.                                                                      |
| Near Elmira, N. Y.           | Cast of small left valve. From Buck's quarry.                                            |
| Big Flats, N. Y.             | Cast of left valve. From a boulder.                                                      |
| Near Elmira, N. Y.           | Casts of two left valves. From Buck's quarry.                                            |
| " "                          | Casts of two large left valves.                                                          |
| Chemung Upper Narrows, N. Y. | Cast of left valve.                                                                      |
| Near Elmira, N. Y.           | Casts of one right and three left valves.                                                |
| Seneca Lake, N. Y.           | Cast of right valve. From "Baileytown."                                                  |
| .....                        | As <i>Pterinea? cardiiformis</i> .                                                       |
| .....                        | Referred to present genus.                                                               |
| .....                        | As <i>Megambonia subcardiiformis</i> , by error.                                         |
| Clarence Hollow, N. Y.       | Specimen preserves left valve except wing, shows int. cast right valve.                  |

## Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.                                               | REFERENCE.  |                        |            |           |                     |
|---------------|------------------|---------------------|--------------------------------------------------------------------------|-------------|------------------------|------------|-----------|---------------------|
|               |                  |                     |                                                                          | Work.       | Vol.                   | P.         | Pl.       | Figs.               |
| U. H.         | $\frac{3097}{1}$ | Type.               | <b>Megambonia</b> Hall—Cont.<br><i>cardiiformis</i> ..... Hall.          | Pal. N. Y.  | 5, pt. 1.<br>Pl. & Ex. | .....      | 52        | 1, 3                |
| Orisk.        | $\frac{2690}{1}$ | "                   | "<br><i>lamellosa</i> ..... Hall.<br><i>subcardiiformis</i> .....        | " "         | 5, pt. 1<br>3          | 515<br>467 | 52<br>109 | 1, 3<br>5           |
|               |                  |                     | <b>Microdon</b> Conrad.....                                              |             |                        |            |           |                     |
|               |                  |                     | <i>bellistriata</i> .....                                                |             |                        |            |           |                     |
|               |                  |                     | <i>complanatus</i> .....                                                 |             |                        |            |           |                     |
|               |                  |                     | <i>gregaria</i> .....                                                    |             |                        |            |           |                     |
|               |                  |                     | <i>tenuistriata</i> .....                                                |             |                        |            |           |                     |
| Ham.          | $\frac{4780}{1}$ | Fig'd Sp. and G. T. | <b>Modiella</b> Hall.<br><i>pygmæa</i> (Conrad) .. Hall.                 | Pal. N. Y.  | 5, pt. 1,<br>Pl. & Ex. | .....      | 76        | 11                  |
| "             | $\frac{4780}{2}$ | "                   | " " " "                                                                  | " "         | 5, pt. 1               | 514        | 76        | 11                  |
| "             | $\frac{4780}{3}$ | "                   | " " " "                                                                  | " "         | 5, pt. 1               | 514        | 76        | 15                  |
|               |                  |                     | <b>Modiola</b> Lamarck.<br>(Mytilops.)<br><i>præcedens</i> ..... H. & W. | P. N. L. S. | pt. 2                  | 1          | .....     | .....               |
| Chem.         | $\frac{4781}{1}$ | Type.               | "<br>Hall.                                                               | Pal. N. Y.  | 5, pt. 1,<br>Pl. & Ex. | .....      | 33        | 9-11, 13,<br>17, 18 |
|               |                  |                     | "                                                                        | " "         | 5, pt. 1               | 267        | 33        | 9-11, 13,<br>17, 18 |
| Ham.          | $\frac{4782}{1}$ | "                   | <b>Modiomorpha</b> H. & W.<br><i>affinis</i> ..... Hall.                 | Pal. N. Y.  | 5, pt. 1               | 284        | 37        | 13, 14              |
|               |                  |                     | "                                                                        | " "         | 5, pt. 1,<br>Pl. & Ex. | .....      | 37        | 13, 14              |
| "             | $\frac{4783}{1}$ | "                   | <i>alta</i> ..... Conrad.<br>H. & W.                                     | Geol. N. Y. | 1841                   | 52         | .....     | .....               |
|               |                  |                     | "<br>Hall.                                                               | P. N. L. S. | pt. 2                  | 75         |           |                     |
| "             | $\frac{4783}{2}$ | Fig'd.              | " (Conrad) ..... Hall.                                                   | Pal. N. Y.  | 5, pt. 1               | 278        | 37        | 15                  |
| "             | $\frac{4783}{3}$ | "                   | " " " "                                                                  | " "         | 5, pt. 1               | 278        | 37        | 9                   |
| "             | $\frac{4783}{1}$ | "                   | " " " "                                                                  | " "         | 5, pt. 1               | 278        | 37        | 10, 11              |
|               |                  |                     | " " " "                                                                  | " "         | 5, pt. 1               | 278        | 80        | 7                   |
| U. H.         | $\frac{4215}{1}$ | Type.               | <i>amygdalina</i> .....                                                  |             |                        |            |           |                     |
|               |                  |                     | <i>clarens</i> ..... Hall.                                               | Pal. N. Y.  | 5, pt. 1               | 273        | 41        | 4                   |
|               |                  |                     | "                                                                        | " "         | 5, pt. 1,<br>Pl. & Ex. | .....      | 41        | 4                   |
| Ham.          | $\frac{4212}{1}$ | Fig'd Sp. and G. T. | <i>complanata</i> .....                                                  |             |                        |            |           |                     |
|               |                  |                     | <i>concentrica</i> (Con) H. & W.                                         | P. N. L. S. | pt. 2                  | 73         |           |                     |
| "             | $\frac{4212}{4}$ | "                   | " " " "                                                                  | Pal. N. Y.  | 5, pt. 1               | 275        | 34        | 9, 10               |
| "             | $\frac{4212}{2}$ | "                   | " " " "                                                                  | " "         | 5, pt. 1               | 275        | 36        | 1, 5                |
| "             | "                | "                   | " " " "                                                                  | " "         | 5, pt. 1               | 275        | 36        | 4, 10               |
| "             | "                | "                   | " " " "                                                                  | " "         | 5, pt. 1               | 275        | 36        | 8                   |
| "             | "                | "                   | " " " "                                                                  | " "         | 5, pt. 1               | 275        | 36        | 11                  |
| "             | $\frac{4212}{3}$ | "                   | " " " "                                                                  | " "         | 5, pt. 1               | 275        | 36        | 14                  |
| "             | $\frac{4784}{1}$ | Type.               | <i>cymbula</i> ..... H. & W.<br>Hall.                                    | P. N. L. S. | pt. 2                  | 75         |           |                     |
|               |                  |                     | "                                                                        | Pal. N. Y.  | 5, pt. 1               | 282        | 36        | 19, 20              |
|               |                  |                     | <i>hyalea</i> .....                                                      |             |                        |            |           |                     |
| U. H.         | $\frac{4213}{1}$ | Type.               | <i>linguiformis</i> ..... Hall.                                          | Pal. N. Y.  | 5, pt. 1,<br>Pl. & Ex. | .....      | 34        | 16, 17              |
| Ham.          | $\frac{4785}{1}$ | "                   | "<br><i>macilenta</i> ..... H. & W.<br>Hall.                             | P. N. L. S. | pt. 2                  | 76         |           |                     |
|               |                  |                     | "                                                                        | Pal. N. Y.  | 5, pt. 1               | 280        | 37        | 17                  |
|               |                  |                     | "                                                                        |             |                        |            | 39        | 21                  |
| "             | $\frac{4785}{2}$ | "                   | " (H. & W.) Hall.                                                        | Pal. N. Y.  | 5, pt. 1               | 280        | 39        | 17                  |
| "             | $\frac{4785}{3}$ | "                   | " " " "                                                                  | " "         | 5, pt. 1               | 280        | 39        | 19                  |



| LOCALITY.                             | REMARKS.                                                                                                                |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| .....                                 | As <i>Megambonia subcardiiformis</i> , by error.                                                                        |
| Clarence Hollow, N. Y.                | Two left valves.                                                                                                        |
| Schoharie, N. Y.                      | Cast of left valve.                                                                                                     |
| .....                                 | See <i>Megambonia cardiiformis</i> .                                                                                    |
| .....                                 | Preoccupied. See <i>Cypricardella</i> .                                                                                 |
| .....                                 | See <i>Cypricardella bellistriata</i> .                                                                                 |
| .....                                 | " " <i>complanata</i> .                                                                                                 |
| .....                                 | " " <i>gregaria</i> .                                                                                                   |
| .....                                 | " " <i>tenuistriata</i> .                                                                                               |
| Schoharie Co., N. Y.                  | Cast of left valve.                                                                                                     |
| Near Sheldrake, N. Y.                 | Cast of right valve.                                                                                                    |
| Near Aurora, N. Y.                    | Cast of right valve.                                                                                                    |
| .....                                 | As <i>Modiola præcedens</i> .                                                                                           |
| .....                                 | " <i>Mytilops (Modiola) præcedens</i> .                                                                                 |
| Smethport, Pa.                        | Five casts in fine conglomerate.                                                                                        |
| Pratt's Falls,<br>Onondaga Co., N. Y. | As <i>Modiomorpha alta</i> Conrad sp. A cast, the posterior third of which was broken off before the figures were made. |
| .....                                 | As <i>Cypricardites alta</i> .                                                                                          |
| Cayuga Lake, N. Y.                    | Cast of right valve.                                                                                                    |
| Near Fultonham, N. Y.                 | Cast of individual.                                                                                                     |
| Seneca L., N. Y.                      | Casts of two individuals.                                                                                               |
| Pratt's Falls,<br>Onondaga Co., N. Y. | A distorted cast of individual. See also <i>Modiomorpha affinis</i> .                                                   |
| .....                                 | See <i>Glossites depressus</i> , <i>G. lingualis</i> and <i>G. subtenuis</i> .                                          |
| Clarence Hollow, N. Y.                | As <i>Modiomorpha perovata</i> M. & W. Cast of right valve.                                                             |
| .....                                 | See " <i>mytiloides</i> .                                                                                               |
| Near Louisville, Ky.                  | Two much exfoliated individuals.                                                                                        |
| Seneca Lake, N. Y.                    | Casts of two right valves.                                                                                              |
| Cayuga Lake, N. Y.                    | Casts of two opposite valves.                                                                                           |
| " "                                   | Cast of left valve.                                                                                                     |
| " "                                   | Cast of individual.                                                                                                     |
| Cumberland, Md.                       | Cast of left valve, not entire.                                                                                         |
| " "                                   | Internal cast retaining part of the silicified shell of both valves.                                                    |
| East Worcester, N. Y.                 | Internal cast of left valve.                                                                                            |
| .....                                 | See <i>Elymella fabalis</i> and <i>E. nuculoides</i> .                                                                  |
| Columbus, Ohio.                       | Internal cast of individual.                                                                                            |
| Catherine Tp., N. Y.                  | Somewhat crushed casts of two individuals, from a boulder.                                                              |
| Cayuga Lake, N. Y.                    | Cast of left valve. From "King's Ferry."                                                                                |
| Canandaigua L., N. Y.                 | Cast of right valve. From "one mile below Monteith's Point."                                                            |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                 | REFERENCE.  |                      |      |      |           |
|---------------|------------------|-------------------|--------------------------------------------|-------------|----------------------|------|------|-----------|
|               |                  |                   |                                            | Work.       | Vol.                 | P.   | Pl.  | Figs.     |
| Ham.          | <u>4786</u><br>1 | Fig'd.            | <b>Modiomorpha</b> H. & W.— <i>Cont.</i>   |             |                      |      |      |           |
|               |                  |                   | mytiloides ( <i>Conrad</i> ) <i>Hall.</i>  | Pal. N. Y.  | 5, pt. I             | 277  | 38   | I         |
|               |                  |                   | " "                                        | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 38   | I         |
|               |                  |                   | H. & W.                                    | P. N. L. S. | pt. 2                | 74   | .... | .....     |
|               |                  |                   | " "                                        | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 38   | 3         |
| "             | <u>4786</u><br>2 | "                 | " "                                        | " "         | 5, pt. I             | 277  | 38   | 3         |
| "             | <u>4786</u><br>3 | "                 | " "                                        | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 38   | 7, 15, 16 |
| "             | <u>4786</u><br>4 | "                 | " "                                        | " "         | 5, pt. I             | 277  | 38   | 7, 15, 16 |
| "             | <u>4786</u><br>5 | "                 | " "                                        | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 38   | 8         |
| "             | <u>4786</u><br>5 | "                 | " "                                        | " "         | 5, pt. I             | 277  | 38   | 8         |
| "             | <u>4786</u><br>5 | "                 | " "                                        | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 38   | 13        |
| "             | <u>4786</u><br>5 | "                 | " "                                        | " "         | 5, pt. I             | 277  | 38   | 13        |
| Chem.         | <u>4787</u><br>1 | Type.             | neglecta..... <i>Hall.</i>                 | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 4I   | 13        |
|               |                  |                   | " "                                        | " "         | 5, pt. I             | 290  | 4I   | 13        |
| U. H.         | <u>4214</u><br>1 | Type.             | <i>perovata</i> .....                      |             |                      |      |      |           |
|               |                  |                   | <i>planulata</i> .....                     |             |                      |      |      |           |
|               |                  |                   | ? ponderosa.... <i>H. &amp; W.</i>         | P. N. L. S. | pt. 2                | 35   | .... | .....     |
|               |                  |                   | <i>Hall.</i>                               | Pal. N. Y.  | 5, pt. I,<br>Pl.&Ex. | .... | 34   | 11, 12    |
|               |                  |                   | " "                                        | " "         | 5, pt. I             | 27I  | 34   | 11, 12    |
| Scho.         | <u>2845</u><br>1 | "                 | putillus..... <i>Hall.</i>                 | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 4I   | 8         |
| "             | <u>2845</u><br>1 | "                 | " "                                        | " "         | 5, pt. I             | 27I  | 4I   | I, 2      |
| Chem.         | <u>4788</u><br>1 | "                 | quadrula..... <i>H. &amp; W.</i>           | P. N. L. S. | pt. 2                | 77   |      |           |
| "             | <u>4788</u><br>1 | "                 | <i>Hall.</i>                               | Pal. N. Y.  | 5, pt. I             | 289  | 4I   | 20-25     |
| "             | <u>4789</u><br>1 | "                 | recurva..... <i>Hall.</i>                  | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 4I   | 17        |
| "             | <u>4789</u><br>1 | "                 | " "                                        | " "         | 5, pt. I             | 288  | 4I   | 17        |
| Scho.         | <u>2846</u><br>1 | Type.             | <i>rigida</i> .....                        |             |                      |      |      |           |
|               |                  |                   | schoharie..... <i>Hall.</i>                | Pal. N. Y.  | 5, pt. I,<br>Pl.&Ex. | .... | 34   | 13        |
| Ham.          | <u>4790</u><br>1 | Fig'd.            | subalata ( <i>Conrad</i> ).. <i>Hall.</i>  | " "         | 5, pt. I             | 269  | 34   | 13        |
| "             | <u>4790</u><br>2 | "                 | " "                                        | " "         | 5, pt. I             | 283  | 39   | I         |
| "             | <u>4790</u><br>3 | "                 | " "                                        | " "         | 5, pt. I             | 283  | 39   | 4         |
| "             | <u>4790</u><br>3 | "                 | " "                                        | " "         | 5, pt. I             | 283  | 39   | 9         |
| Chem.         | <u>4791</u><br>1 | Type.             | " var. chemungensis <i>H.</i>              | " "         | 5, pt. I             | 284  | 4I   | 5         |
|               |                  |                   | " "                                        | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 4I   | 5         |
|               |                  |                   | " "                                        | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 4I   | 6, 8, 9   |
|               |                  |                   | " "                                        | " "         | 5, pt. I             | 284  | 4I   | 6, 8, 9   |
|               |                  |                   | " "                                        | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 4I   | 10        |
|               |                  |                   | " "                                        | " "         | 5, pt. I             | 284  | 4I   | 10        |
|               |                  |                   | " "                                        | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 4I   | 11        |
|               |                  |                   | " "                                        | " "         | 5, pt. I             | 284  | 4I   | 11        |
|               |                  |                   | <b>Mytilarca</b> H. & W.                   |             |                      |      |      |           |
|               |                  |                   | <i>arenacea</i> .....                      |             |                      |      |      |           |
| Chem.         | <u>4792</u><br>1 | Type.             | <i>arenosa</i> .....                       |             |                      |      |      |           |
|               |                  |                   | carinata ( <i>Hall</i> )... <i>Miller.</i> | Am. P. F.   |                      | 197  | .... | .....     |
|               |                  |                   | <i>Hall.</i>                               | Pal. N. Y.  | 5, pt. I,<br>Pl.&Ex. | .... | 32   | 15, 17-19 |
|               |                  |                   | " "                                        | N. Y. S. M. | 35                   | 402  |      |           |
|               |                  |                   | " "                                        | Pal. N. Y.  | 5, pt. I             | 259  | 32   | 15, 17-19 |
| "             | <u>4792</u><br>2 | "                 | " "                                        | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 32   | 16        |
| "             | <u>4792</u><br>2 | "                 | " "                                        | " "         | 5, pt. I             | 259  | 32   | 16        |



| LOCALITY.             | REMARKS.                                                                                                                                |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| .....                 | As <i>Modiomorpha complanata</i> , by error.                                                                                            |
| Dresden, N. Y.        | As type of <i>Modiomorpha planulata</i> , and the same applies throughout this species. Cast of a pair of expanded valves. Found loose. |
| .....                 | As <i>Modiomorpha complanata</i> , by error.                                                                                            |
| Canandaigua L., N.Y.  | Cast of small right valve.                                                                                                              |
| .....                 | As <i>Modiomorpha complanata</i> , by error.                                                                                            |
| Cayuga Lake, N. Y.    | Casts of a pair of expanded valves and of two right valves.                                                                             |
| .....                 | As <i>Modiomorpha complanata</i> , by error.                                                                                            |
| Seneca Lake, N. Y.    | Cast of pair of expanded valves.                                                                                                        |
| .....                 | As <i>Modiomorpha complanata</i> , by error.                                                                                            |
| Near Fultonham, N.Y.  | Cast of pair of expanded valves.                                                                                                        |
| .....                 |                                                                                                                                         |
| Near Elmira, N. Y.    | Cast of right valve. See also <i>Leptodesma complanatum</i> .                                                                           |
| .....                 | See <i>Modiomorpha clarens</i> .                                                                                                        |
| .....                 | “ “ <i>mytiloides</i> .                                                                                                                 |
| .....                 | As <i>Sanguinolites</i> (?) <i>ponderosus</i> .                                                                                         |
| .....                 | Generic reference not queried.                                                                                                          |
| .....                 |                                                                                                                                         |
| Clarence Hollow, N.Y. | Nearly entire internal cast.                                                                                                            |
| .....                 |                                                                                                                                         |
| Schoharie, N. Y.      | Cast of individual.                                                                                                                     |
| .....                 |                                                                                                                                         |
| Belmont, N. Y.        | Eight casts of separated valves in six blocks.                                                                                          |
| .....                 | Generic reference queried.                                                                                                              |
| Belmont, N. Y.        | Cast of left valve. In the explanation of the plate this figure is “referred with doubt” to <i>Modiomorpha rigida</i> Hall.             |
| .....                 | See <i>Modiomorpha recurva</i> and <i>M. subalata</i> var. <i>chemungensis</i> .                                                        |
| .....                 |                                                                                                                                         |
| Schoharie, N. Y.      | Internal cast of individual.                                                                                                            |
| Seneca Lake, N. Y.    | Cast of small right valve.                                                                                                              |
| Western New York.     | Cast of small right valve.                                                                                                              |
| Lake Erie, N. Y.      | Cast of left valve. From ten miles south of Buffalo. See also <i>Modiomorpha subalata</i> var. <i>chemungensis</i> .                    |
| .....                 |                                                                                                                                         |
| Ithaca ?, N. Y.       | As <i>Modiomorpha subalata</i> . Cast of left valve.                                                                                    |
| .....                 | “ “ “                                                                                                                                   |
| Ithaca, N. Y.         | Casts of a right valve and two pairs of valves. From Fall creek.                                                                        |
| .....                 | As type of <i>Modiomorpha rigida</i> .                                                                                                  |
| Ithaca, N. Y.         | Cast. The reference to this var. is queried in the text. Fr. Fall creek.                                                                |
| .....                 | As type of <i>Modiomorpha rigida</i> .                                                                                                  |
| Cortland Co., N. Y.   | Cast of right valve.                                                                                                                    |
| .....                 | See <i>Plethomytilus arenaceus</i> .                                                                                                    |
| .....                 | “ “ “                                                                                                                                   |
| .....                 | <i>Nomen nudum</i> .                                                                                                                    |
| .....                 |                                                                                                                                         |
| Near Elmira, N. Y.    | Casts of two right and two left valves.                                                                                                 |
| .....                 |                                                                                                                                         |
| Factoryville, N. Y.   | Cast of a right valve. Tioga county.                                                                                                    |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.                                                 | REFERENCE.                              |                                        |                 |     |                         |
|---------------|------------------|---------------------|----------------------------------------------------------------------------|-----------------------------------------|----------------------------------------|-----------------|-----|-------------------------|
|               |                  |                     |                                                                            | Work.                                   | Vol.                                   | P.              | Pl. | Figs.                   |
| Chem.         | <u>4793</u><br>1 | Fig'd Sp. and G. T. | <b>Mytilarca</b> H. & W.— <i>Cont.</i><br>chemungensis(Con.)H.&W.<br>Hall. | P. N. L. S.<br>Pal. N. Y.               | pt. 2<br>5, pt. I                      | 23<br>258       |     | 8                       |
|               | <u>4793</u><br>2 |                     | “ “ “ “                                                                    | “ “                                     | 5, pt. I                               | 258             | 32  | 9, II                   |
|               | “                |                     | “ “ “                                                                      | “ “                                     | 5, pt. I                               | 258             | 32  | IO                      |
|               | “                |                     | oviformis . . . . .                                                        | “ “                                     | “                                      | “               | “   | “                       |
| Chem.         | <u>4794</u><br>1 | Type.               | ponderosa . . . . .                                                        | “ “                                     | “                                      | “               | “   | “                       |
|               | “                |                     | regularis . . . . . Hall.                                                  | N. Y. S. M.<br>Pal. N. Y.               | 35<br>5, pt. I,<br>Pl.&Ex.             | 403             |     |                         |
|               | “                |                     | “ “ “                                                                      | “ “                                     | 5, pt. I                               | 260             | 32  | I2                      |
|               | “                |                     | triquetra . . . . .                                                        | “ “                                     | “                                      | “               | “   | “                       |
| Chem.         | <u>4795</u><br>1 | Type.               | umbonata . . . . . Hall.                                                   | Pal. N. Y.<br>N. Y. S. M.<br>Pal. N. Y. | 5, pt. I,<br>Pl.&Ex.<br>35<br>5, pt. I | “<br>402<br>257 | 32  | I-4                     |
|               | “                |                     | “ “ “                                                                      | “ “                                     | “                                      | “               | “   | “                       |
|               | “                |                     | “ “ “                                                                      | “ “                                     | “                                      | “               | “   | “                       |
|               | “                |                     | “ “ “                                                                      | “ “                                     | “                                      | “               | “   | “                       |
| Ham.          | <u>4796</u><br>1 | Fig'd.              | <b>Nucula</b> Lamarck.<br>bellistriata (Conrad) Hall.                      | “ “                                     | 5, pt. I                               | 318             | 46  | 2                       |
|               | <u>4796</u><br>2 |                     | “ “ “                                                                      | “ “                                     | 5, pt. I                               | 318             | 46  | 3, 5                    |
|               | <u>4797</u><br>1 |                     | corbuliformis . . H. & W.<br>Hall.                                         | P. N. L. S.<br>Pal. N. Y.               | pt. 2<br>5, pt. I                      | 2<br>319        | 46  | 29                      |
|               | <u>4797</u><br>2 |                     | “ “ (H. & W.) Hall.                                                        | “ “                                     | 5, pt. I                               | 319             | 46  | 32                      |
| Chem.         | <u>4797</u><br>3 | “                   | “ ? “ “                                                                    | “ “                                     | 5, pt. I                               | 319             | 46  | 35, 36                  |
|               | <u>4798</u><br>1 |                     | diffidens . . . . . Hall.                                                  | “ “                                     | 5, pt. I                               | 322             | 45  | I2                      |
|               | “                |                     | “ “ “                                                                      | “ “                                     | 5, pt. I,<br>Pl.&Ex.                   | “               | 45  | I2                      |
|               | <u>4798</u><br>2 |                     | “ . . . . . “                                                              | “ “                                     | 5, pt. I,<br>Pl.&Ex.                   | “               | 45  | I4                      |
| Ham.          | <u>4799</u><br>1 | “                   | “ . . . . . “                                                              | “ “                                     | 5, pt. I                               | 322             | 45  | I4                      |
|               | “                |                     | lamellata . . . . . Hall.                                                  | “ “                                     | 5, pt. I,<br>Pl.&Ex.                   | “               | 5I  | 20, l.v. X <sub>3</sub> |
|               | “                |                     | “ “ “                                                                      | “ “                                     | 5, pt. I                               | 320             | 5I  | 20, “                   |
|               | <u>4799</u><br>2 |                     | “ . . . . . “                                                              | “ “                                     | 5, pt. I,<br>Pl.&Ex.                   | “               | 45  | I3                      |
| “             | <u>4800</u><br>1 | Fig'd.              | “ “ “                                                                      | “ “                                     | 5, pt. I                               | 320             | 45  | I3                      |
|               | <u>4800</u><br>2 |                     | lirata (Conrad) . . . . Hall.                                              | “ “                                     | 5, pt. I                               | 316             | 45  | 5                       |
|               | “                |                     | “ “ “                                                                      | “ “                                     | 5, pt. I                               | 316             | 45  | II                      |
|               | “                |                     | “ “ “                                                                      | “ “                                     | 5, pt. I                               | 316             | 45  | I5, 24, 25              |
| “             | <u>4801</u><br>1 | Type.               | Randalli . . . . . H. & W.<br>Hall.                                        | P. N. L. S.<br>Pal. N. Y.               | pt. 2<br>5, pt. I                      | 3<br>315        | 45  | 6, IO, I6               |
|               | <u>4801</u><br>2 |                     | “ (H. & W.) Hall.                                                          | “ “                                     | 5, pt. I                               | 315             | 45  | 7-9, 23                 |
|               | <u>4801</u><br>3 |                     | “ “ “                                                                      | “ “                                     | 5, pt. I,<br>Pl.&Ex.                   | “               | 45  | 26, 27                  |
|               | “                |                     | “ “ “                                                                      | “ “                                     | 5, pt. I                               | 315             | 45  | 26, 27                  |
| “             | <u>4802</u><br>1 | “                   | subelliptica . . . . . Hall.                                               | “ “                                     | 5, pt. I,<br>Pl.&Ex.                   | “               | 45  | 28                      |
|               | “                |                     | “ “ “                                                                      | “ “                                     | 5, pt. I                               | 317             | 45  | 28                      |
|               | “                |                     | “ “ “                                                                      | “ “                                     | “                                      | “               | “   | “                       |
|               | “                |                     | “ “ “                                                                      | “ “                                     | “                                      | “               | “   | “                       |
| Ham.          | <u>4803</u><br>1 | Fig'd.              | <b>Nuculites</b> Conrad.<br>cuneiformis(Conrad)Hall.                       | “ “                                     | 5, pt. I                               | 325             | 47  | I5                      |
|               | <u>4803</u><br>2 |                     | “ “ “                                                                      | “ “                                     | 5, pt. I                               | 325             | 47  | I6                      |
|               | <u>4804</u><br>1 |                     | nyssa . . . . . H. & W.<br>Hall.                                           | P. N. L. S.<br>Pal. N. Y.               | pt. 2<br>5, pt. I,<br>Pl.&Ex.          | 5<br>“          | 47  | 27                      |
|               | “                |                     | “ “ “                                                                      | “ “                                     | 5, pt. I                               | 328             | 47  | 27                      |
| “             | <u>4804</u><br>2 | “                   | “ (H. & W.) . . . Hall.                                                    | “ “                                     | 5, pt. I                               | 328             | 47  | 29, 30                  |
|               | <u>4805</u><br>1 |                     | oblongatus (Conrad) Hall.                                                  | “ “                                     | 5, pt. I                               | 324             | 47  | 2                       |
|               | <u>4805</u><br>2 |                     | “ “ “                                                                      | “ “                                     | 5, pt. I                               | 324             | 47  | 7-9, II, I2             |
|               | “                |                     | “ “ “                                                                      | “ “                                     | “                                      | “               | “   | “                       |



| LOCALITY.             | REMARKS.                                                                                                                                               |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Belmont, N. Y.        | Cast of right valve.                                                                                                                                   |
| Rockville, N. Y.      | Casts of two opposite valves.                                                                                                                          |
| “ “                   | Imprint of left valve.                                                                                                                                 |
| .....                 | See <i>Plethomytilus oviformis</i> .                                                                                                                   |
| .....                 | “ “ <i>ponderosus</i> .                                                                                                                                |
| .....                 | As <i>Mytilarca chemungensis</i> .                                                                                                                     |
| Leon Centre, N. Y.    | Cast of left valve.                                                                                                                                    |
| .....                 | See <i>Gosselettia triquetra</i> .                                                                                                                     |
| Ithaca, N. Y.         | Cast of individual.                                                                                                                                    |
| Northville, N. Y.     | Cast of right valve. Figure is an enlargement to two diameters.                                                                                        |
| Onondaga Co., N. Y.   | Casts of two opposite valves in separate blocks. Figures are enlargements to two diameters.                                                            |
| Cayuga Lake, N. Y.    | Cast of left valve. From “ Kidder’s Ferry.”                                                                                                            |
| Ludlowville, N. Y.    | Cast of right valve.                                                                                                                                   |
| Seneca Lake, N. Y.    | Specific reference queried. Internal cast of individual.                                                                                               |
| Near Ithaca, N. Y.    | As a type of <i>Nucula Randalli</i> . Cast of left valve. From Fall creek.                                                                             |
| .....                 | “ “ “ “                                                                                                                                                |
| Chemung Co., N. Y.    | Cast of left valve.                                                                                                                                    |
| Cayuga Lake, N. Y.    | Cast of left valve. Not a nukuloid shell.                                                                                                              |
| .....                 | As a type of <i>Nucula Randalli</i> .                                                                                                                  |
| Near Ithaca, N. Y.    | Cast of left valve. From the “ Inclined Plane.”                                                                                                        |
| Hamilton, N. Y.       | Cast of small right valve.                                                                                                                             |
| Seneca Lake, N. Y.    | Cast of large right valve.                                                                                                                             |
| “ “                   | Internal casts of two individuals. The figures are enlargements to two diameters. See also <i>Nucula Randalli</i> .                                    |
| “ “                   | Very perfect individual.                                                                                                                               |
| Onondaga Co., N. Y.   | Two large individuals. From Pratt’s Falls.                                                                                                             |
| .....                 | As <i>Nucula lirata</i> Conrad.                                                                                                                        |
| Cumberland, Md.       | Internal cast of individual. Figures are enlargements to two diameters. See also <i>Nucula diffidens</i> and <i>N. lamellata</i> .                     |
| “ “                   | Internal cast of individual. Not quite entire.                                                                                                         |
| Fultonham, N. Y.      | Cast of right valve.                                                                                                                                   |
| Jefferson, N. Y.      | Cast of left valve in block with <i>Leda brevirostris</i> , figs. 38, 39, pl. 47, and <i>Actinopteria Boydi</i> , figs. 8, 15, pl. 19, same volume.    |
| W. Bloomfield, N. Y.  | As <i>Nuculites triqueter</i> Con., but the specimen is certainly <i>N. nyssa</i> and is one of the original types of the species. Cast of left valve. |
| Lake Erie, N. Y.      | Casts of two opposite valves. From the mouth of 18 Mile creek. See also <i>Nuculites triqueter</i> .                                                   |
| Schoharie Co., N. Y.  | Cast of pair of somewhat expanded valves.                                                                                                              |
| Paterson’s Creek, Va. | Internal casts of an individual and a left valve.                                                                                                      |

## Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv.             | Cat. No.         | Type or Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.                    | REFERENCE.  |                      |      |      |               |
|---------------------------|------------------|---------------------|-----------------------------------------------|-------------|----------------------|------|------|---------------|
|                           |                  |                     |                                               | Work.       | Vol.                 | P.   | Pl.  | Figs.         |
| <b>Nuculites</b> Conrad.  |                  |                     |                                               |             |                      |      |      |               |
| Ham.                      | <u>4806</u><br>1 | Fig'd.              | triqueter ( <i>Conrad</i> ) <i>Hall.</i>      | Pal. N. Y.  | 5, pt. I             | 326  | 47   | 18            |
| "                         | <u>4806</u><br>2 | "                   | " " "                                         | " "         | 5, pt. I             | 326  | 47   | 19            |
| "                         | <u>4806</u><br>3 | "                   | " " "                                         | " "         | 5, pt. I             | 326  | 47   | 21            |
| "                         | <u>4806</u><br>4 | "                   | " " "                                         | " "         | 5, pt. I             | 326  | 47   | 23, 24        |
| "                         | <u>4806</u><br>2 | "                   | " " "                                         | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 47   | 25            |
| "                         |                  |                     | " " "                                         | " "         | 5, pt. I             | 326  | 47   | 25            |
| "                         | <u>4806</u><br>5 | "                   | " " "                                         | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 47   | 28            |
| "                         |                  |                     | " " "                                         | " "         | 5, pt. I             | 326  | 47   | 28            |
| <b>Nyassa</b> H. & W.     |                  |                     |                                               |             |                      |      |      |               |
| "                         | <u>4807</u><br>1 | Gen. and Sp. Type   | arguta..... <i>H. &amp; W.</i>                | P. N. L. S. | pt. 2                | 28   | .... | ....          |
| "                         | <u>4807</u><br>2 | "                   | " ( <i>H. &amp; W.</i> ) <i>Hall.</i>         | Pal. N. Y.  | 5, pt. I             | 354  | 53   | 7,8,enl.X2    |
| "                         | <u>4807</u><br>3 | "                   | " " "                                         | " "         | 5, pt. I             | 354  | 53   | 11            |
| "                         | <u>4807</u><br>4 | "                   | " " "                                         | " "         | 5, pt. I             | 354  | 53   | 12, 13        |
| "                         | <u>4807</u><br>5 | "                   | " " "                                         | " "         | 5, pt. I             | 354  | 53   | 14-16         |
| "                         | <u>4807</u><br>6 | "                   | " " "                                         | " "         | 5, pt. I             | 354  | 53   | 17-19         |
| "                         | <u>4807</u><br>7 | "                   | " " <i>Whitf.</i>                             | N. Y. A. S. | 2                    | 216  | .... | ....          |
| "                         |                  |                     | " " "                                         | " "         | 5                    | 558  | 11   | 18            |
| "                         | <u>4808</u><br>1 | Type.               | recta..... <i>H. &amp; W.</i>                 | Geol. O.    | 7                    | 451  | 7    | 18            |
| "                         | "                | "                   | " ( <i>H. &amp; W.</i> ) <i>Hall.</i>         | P. N. L. S. | pt. 2                | 29   |      |               |
| "                         | "                | "                   | " " "                                         | Pal. N. Y.  | 5, pt. I             | 356  | 53   | 2             |
| "                         | <u>4809</u><br>1 | "                   | subalata..... <i>H. &amp; W.</i>              | " "         | 5, pt. I             | 356  | 53   | 5, 6          |
| "                         | <u>4809</u><br>2 | "                   | " ( <i>H. &amp; W.</i> ) <i>Hall.</i>         | P. N. L. S. | pt. 2                | 29   |      |               |
| "                         |                  |                     | " " "                                         | Pal. N. Y.  | 5, pt. I             | 355  | 53   | 21, 22        |
| "                         |                  |                     | " " "                                         | " "         | 5, pt. I             | 355  | 53   | 23, 25, 26    |
| <b>Orthonota</b> Conrad.  |                  |                     |                                               |             |                      |      |      |               |
| "                         | <u>4810</u><br>1 | Fig'd.              | carinata ( <i>Con.</i> ) <i>H. &amp; W.</i>   | P. N. L. S. | pt. 2                | 87   |      |               |
| "                         | <u>4811</u><br>1 | "                   | " <i>Hall.</i>                                | Pal. N. Y.  | 5, pt. I             | 479  | 78   | 35            |
| "                         | <u>4812</u><br>1 | Type.               | ensiformis..... <i>H. &amp; W.</i>            | P. N. L. S. | pt. 2                | 89   |      |               |
| "                         |                  |                     | " <i>Hall.</i>                                | Pal. N. Y.  | 5, pt. I             | 480  | 78   | 36            |
| "                         | <u>4812</u><br>1 | "                   | ? parvula..... <i>H. &amp; W.</i>             | P. N. L. S. | pt. 2                | 88   | .... | ....          |
| "                         | <u>4812</u><br>2 | "                   | " <i>Hall.</i>                                | Pal. N. Y.  | 5, pt. I,<br>Pl.&Ex. | .... | 78   | 32            |
| "                         |                  |                     | " " "                                         | " "         | 5, pt. I             | 482  | 78   | 32            |
| "                         | <u>4812</u><br>2 | "                   | " ( <i>H. &amp; W.</i> ) <i>Hall.</i>         | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 65   | 2, 3          |
| "                         |                  |                     | " " "                                         | " "         | 5, pt. I             | 482  | 65   | 2, 3          |
| Chem.                     | <u>4813</u><br>1 | "                   | rigida..... <i>Hall.</i>                      | " "         | 5, pt. I             | 481  | 80   | 6             |
| "                         |                  |                     | " <i>H. &amp; W.</i>                          | P. N. L. S. | pt. 2                | 41   | .... | ....          |
| "                         |                  |                     | " <i>Hall.</i>                                | Pal. N. Y.  | 5, pt. I,<br>Pl.&Ex. | .... | 80   | 6             |
| <i>siliquoidea</i> .....  |                  |                     |                                               |             |                      |      |      |               |
| Ham.                      | <u>4814</u><br>1 | Fig'd.              | undulata ( <i>Conrad</i> ) <i>Hall.</i>       | Pal. N. Y.  | 5, pt. I             | 478  | 78   | 42            |
| <b>Palæoneilo</b> H. & W. |                  |                     |                                               |             |                      |      |      |               |
| Chem.                     | <u>4815</u><br>1 | Type.               | bisulcata..... <i>H. &amp; W.</i>             | P. N. L. S. | pt. 2                | 10   |      |               |
| "                         | <u>4816</u><br>1 | "                   | " <i>Hall.</i>                                | Pal. N. Y.  | 5, pt. I             | 344  | 50   | 12            |
| "                         | <u>4817</u><br>1 | Fig'd Sp. and G. T. | brevis..... <i>H. &amp; W.</i>                | P. N. L. S. | pt. 2                | 10   |      |               |
| "                         |                  |                     | " <i>Hall.</i>                                | Pal. N. Y.  | 5, pt. I             | 342  | 50   | 31, 32        |
| "                         | <u>4817</u><br>1 | "                   | constricta ( <i>Con.</i> ) <i>H. &amp; W.</i> | P. N. L. S. | pt. 2                | 7    |      |               |
| "                         |                  |                     | " <i>Hall.</i>                                | Pal. N. Y.  | 5, pt. I             | 333  | 48   | 1, 5          |
| "                         | <u>4817</u><br>2 | "                   | " " "                                         | " "         | 5, pt. I             | 333  | 48   | 2             |
| "                         | <u>4817</u><br>3 | "                   | " " "                                         | " "         | 5, pt. I             | 333  | 48   | 6, 12         |
| "                         | <u>4817</u><br>4 | "                   | " " "                                         | " "         | 5, pt. I             | 333  | 48   | 8, 11         |
| "                         | <u>4817</u><br>5 | "                   | " " "                                         | " "         | 5, pt. I             | 333  | 48   | 9, 10, 14, 15 |



| LOCALITY.                    | REMARKS.                                                               |
|------------------------------|------------------------------------------------------------------------|
| Genoa, N. Y.                 | Cast of right valve.                                                   |
| W. Bloomfield, N. Y.         | Cast of left valve.                                                    |
| Ontario Co., N. Y.           | Casts of two opposite valves in same block.                            |
| Paterson's Creek, Va.        | Cast of left valve. Not from Cumberland, Md.                           |
| .....                        | As a type of <i>Nuculites nyssa</i> .                                  |
| W. Bloomfield, N. Y.         | Cast of left valve.                                                    |
| .....                        | As a type of <i>Nuculites nyssa</i> .                                  |
| Fultonham, N. Y.             | Cast of right valve. See also <i>Nuculites nyssa</i> .                 |
| .....                        | Genus named as a subgenus of <i>Modiolopsis</i> , but not described.   |
| Chenango Co., N. Y.          | Internal cast of right valve. From Pitcher's Springs.                  |
| Madison Co., N. Y.           | Cast of left valve.                                                    |
| Schoharie Co., N. Y.         | Casts of an individual and a right valve.                              |
| Onondaga Co., N. Y.          | Internal casts of an individual and a right valve. From Pratt's Falls. |
| Otsego Co., N. Y.            | Internal cast of large right valve.                                    |
| East Worcester, N. Y.        | Cast of right valve.                                                   |
| .....                        | Genus first described.                                                 |
| Tully, Ohio.                 | Cast of right valve.                                                   |
| Schoharie Co., N. Y.         | Cast of left valve.                                                    |
| “ “                          | Casts of two opposite valves in block with many others.                |
| Summit, N. Y.                | Casts of two right valves. Schoharie county.                           |
| Near Fultonham, N. Y.        | Casts of three left valves.                                            |
| Fultonham, N. Y.             | Cast of right valve, not entire.                                       |
| Schoharie Co., N. Y.         | Imprint of right valve.                                                |
| .....                        | Generic reference not queried.                                         |
| .....                        | Generic reference not queried.                                         |
| Schoharie Co., N. Y.         | Cast of a pair of valves, partly expanded.                             |
| .....                        | As <i>Sanguinolites truncatus</i> Conrad.                              |
| Bear's Gulf, N. Y.           | Casts of two opposite valves in same block. Schoharie county.          |
| .....                        | As type of <i>Sanguinolites undatus</i> .                              |
| Near Elmira, N. Y.           | “ “ “ “ Cast of right valve. From “Buck's quarry.”                     |
| .....                        | See <i>Palæosolen siliquoides</i> .                                    |
| Fultonham, N. Y.             | Cast of individual and imprint of its left valve.                      |
| Near Elmira, N. Y.           | Cast of right valve. From “Buck's quarry.”                             |
| Belmont, N. Y.               | Casts of two left valves, separate.                                    |
| Seneca or Cayuga Lake, N. Y. | Casts of two opposite valves.                                          |
| Seneca Lake, N. Y.           | Cast of right valve. From “Baileytown.”                                |
| Fultonham, N. Y.             | Internal casts of an individual and a left valve.                      |
| Cayuga Lake, N. Y.           | Cast of left valve.                                                    |
| Paterson's Creek, Va.        | Internal casts of a left valve and a pair of expanded valves.          |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.          | Type or Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.                                                  | REFERENCE.  |                      |      |       |               |
|---------------|-------------------|---------------------|-----------------------------------------------------------------------------|-------------|----------------------|------|-------|---------------|
|               |                   |                     |                                                                             | Work.       | Vol                  | P.   | Pl.   | Figs.         |
| Port.         | <u>4817</u><br>6  | Fig'd Sp. and G. T. | <b>Palæoneilo</b> H. & W.— <i>Cont.</i><br><i>constricta</i> (Conrad) Hall. | Pal. N. Y.  | 5, pt. I             | 333  | 51    | 17            |
| Chem.         | <u>4818</u><br>1  | "                   | " <i>var. flexuosa</i> Hall.                                                | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 48    | 17, 19, 20    |
| "             | <u>4819</u><br>1  | "                   | "                                                                           | " "         | 5, pt. I             | 334  | 48    | 17, 19, 20    |
| "             | <u>4819</u><br>1  | "                   | <i>elongata</i> .....Hall.                                                  | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 48    | 39            |
| Ham.          | <u>4820</u><br>1  | Fig'd.              | <i>emarginata</i> (Con.)H.&W.                                               | P. N. L. S. | 5, pt. I             | 345  | 48    | 39            |
| "             | <u>4820</u><br>2  | "                   | " " " "                                                                     | Pal. N. Y.  | pt. 2                | 7    |       |               |
| Chem.         | <u>4820</u><br>3  | "                   | " " " "                                                                     | " "         | 5, pt. I             | 338  | 50    | 4, 5, 7       |
| "             | <u>4821</u><br>1  | "                   | " " " "                                                                     | " "         | 5, pt. I             | 338  | 50    | 8             |
| "             | <u>4821</u><br>1  | "                   | <i>filosa</i> (Conrad) H. & W.                                              | P. N. L. S. | 5, pt. I             | 338  | 50    | 11            |
| "             | <u>4821</u><br>2  | "                   | " " " "                                                                     | Pal. N. Y.  | pt. 2                | 10   |       |               |
| Ham.          | <u>4822</u><br>1  | "                   | <i>maxima</i> (Conrad)...Hall.                                              | Pal. N. Y.  | 5, pt. I             | 343  | 49    | 33, 35, 37    |
| "             | <u>4822</u><br>2  | "                   | " " " "                                                                     | " "         | 5, pt. I             | 343  | 49    | 34, 36        |
| "             | <u>4822</u><br>2  | "                   | " " " "                                                                     | P. N. L. S. | pt. 2                | 9    |       |               |
| "             | <u>4822</u><br>2  | "                   | " " " "                                                                     | Pal. N. Y.  | 5, pt. I             | 335  | 48    | 29-34, 38     |
| "             | <u>4822</u><br>2  | "                   | " " " "                                                                     | " "         | 5, pt. I             | 335  | 48    | 35, 37        |
| "             | <u>4823</u><br>1  | Type.               | <i>muta</i> .....H. & W.                                                    | Geol. N. Y. | 4th D.               | 197  | ct.78 | 6             |
| "             | <u>4823</u><br>1  | "                   | " " " "                                                                     | Pal. N. Y.  | 5, pt. I             | 335  | 48    | 36            |
| "             | <u>4824</u><br>1  | "                   | <i>perplana</i> .....H. & W.                                                | P. N. L. S. | pt. 2                | 8    |       |               |
| "             | <u>4824</u><br>2  | "                   | " (H. & W.) Hall.                                                           | Pal. N. Y.  | 5, pt. I             | 337  | 49    | 27, 30        |
| "             | <u>4824</u><br>2  | "                   | " " " "                                                                     | P. N. L. S. | pt. 2                | 12   | ....  | .....         |
| "             | <u>4824</u><br>3  | "                   | " " " "                                                                     | Pal. N. Y.  | 5, pt. I             | 339  | 50    | 15            |
| "             | <u>4824</u><br>3  | "                   | " " " "                                                                     | " "         | 5, pt. I             | 339  | 50    | 16, 17, 20-22 |
| "             | <u>4824</u><br>4  | "                   | " " " "                                                                     | " "         | 5, pt. I             | 339  | 50    | 18            |
| "             | <u>4824</u><br>4  | "                   | " " " "                                                                     | " "         | 5, pt. 2             | 339  | 50    | 19            |
| "             | <u>4825</u><br>1  | "                   | <i>plana</i> .....H. & W.                                                   | P. N. L. S. | pt. 2                | 7    |       |               |
| "             | <u>4825</u><br>2  | "                   | " (H. & W.)..Hall.                                                          | Pal. N. Y.  | 5, pt. I             | 334  | 48    | 22, r.v.X2    |
| "             | <u>4825</u><br>3  | "                   | " " " "                                                                     | " "         | 5, pt. I             | 334  | 48    | 23            |
| Port.?        | <u>4826</u><br>1  | "                   | <i>similis</i> .....Whitfield.                                              | " "         | 5, pt. I             | 334  | 48    | 25, 26        |
| "             | <u>4826</u><br>1  | "                   | " " " "                                                                     | N. Y. A. S. | 2                    | 217  |       |               |
| "             | <u>4826</u><br>1  | "                   | " " " "                                                                     | " "         | 5                    | 561  | 12    | 4, 5          |
| Ham.          | <u>4827</u><br>1  | "                   | <i>tenuistriata</i> .....H. & W.                                            | Geol. O.    | 7                    | 453  | 8     | 4, 5          |
| "             | <u>4827</u><br>2  | "                   | " (H. & W.) Hall.                                                           | P. N. L. S. | pt. 2                | 9    |       |               |
| "             | <u>4827</u><br>3  | "                   | " " " "                                                                     | Pal. N. Y.  | 5, pt. I             | 336  | 49    | 1, 14         |
| "             | <u>4827</u><br>4  | "                   | " " " "                                                                     | " "         | 5, pt. I             | 336  | 49    | 2, 3, 9       |
| "             | <u>4827</u><br>4  | "                   | " " " "                                                                     | " "         | 5, pt. I             | 336  | 49    | 10            |
| "             | <u>4827</u><br>4  | "                   | " " " "                                                                     | " "         | 5, pt. I             | 336  | 49    | 11            |
| U. H.         | <u>4210</u><br>1  | "                   | <b>Palæopinna</b> Hall.<br><i>recurva</i> .....Hall.                        | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 25    | 19            |
| "             | <u>4210</u><br>1  | "                   | " " " "                                                                     | N. Y. S. M. | 35                   | 398  |       |               |
| "             | <u>4210</u><br>1  | "                   | " " " "                                                                     | Pal. N. Y.  | 5, pt. I             | 241  | 25    | 19            |
| Ham.          | <u>4828</u><br>1  | Gen. and Sp.Type.   | <b>Palæosolen</b> Hall.....<br><i>siliquoideus</i> ....H. & W.              | P. N. L. S. | pt. 2                | 89   | ....  | .....         |
| "             | <u>4828</u><br>1  | "                   | " " " "                                                                     | Pal. N. Y.  | 5, pt. I,<br>Pl.&Ex. | .... | 78    | 33            |
| "             | <u>4828</u><br>1  | "                   | " " " "                                                                     | " "         | 5, pt. I             | 483  | 78    | 33            |
| "             | <u>4829</u><br>1  | Type.               | <b>Panenka</b> Barrande.<br><i>abrupta</i> .....Hall.                       | " "         | 5, pt. I             | 423  | 69    | 11            |
| "             | <u>4829</u><br>1  | "                   | " " " "                                                                     | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 69    | 11            |
| "             | <u>4829</u><br>1  | "                   | " " " "                                                                     | " "         | 5, pt. I             | 423  | 94    | 16            |
| Mar.          | <u>4388a</u><br>2 | "                   | <i>hero</i> .....Hall.                                                      | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 69    | 3             |
| "             | <u>4424</u><br>1  | "                   | " " " "                                                                     | " "         | 5, pt. I             | 418  | 69    | 3             |
| "             | <u>4424</u><br>1  | "                   | <i>mollis</i> .....Hall.                                                    | " "         | 5, pt. I             | 420  | 80    | 8             |
| "             | <u>4424</u><br>1  | "                   | " " " "                                                                     | " "         | 5, pt. I,<br>Pl.&Ex. | .... | 80    | 8             |



| LOCALITY.                      | REMARKS.                                                                                        |
|--------------------------------|-------------------------------------------------------------------------------------------------|
| Near Portland Harbor,<br>N. Y. | Cast of left valve.                                                                             |
| Near Ithaca, N. Y.             | Casts of a left and two right valves.                                                           |
| “ “                            | Cast of right valve.                                                                            |
| Jefferson, N. Y.               | Casts of one left and two right valves.                                                         |
| Schoharie Co., N. Y.           | Cast of a small left valve.                                                                     |
| Near Ithaca, N. Y.             | Cast of right valve. From the “Inclined Plane.”                                                 |
| Cortland, N. Y.                | Casts of two opposite valves and an individual (fig. 35).                                       |
| Near Ithaca, N. Y.             | Casts of two opposite valves.                                                                   |
| Fultonham, N. Y.               | Casts of one right and three left valves and an entire individual.                              |
| Cayuga Lake, N. Y.             | Cast of a right valve.                                                                          |
| .....                          | As type of <i>Tellina? ovata</i> Hall.                                                          |
| Cayuga Lake, N. Y.             | Cast of a pair of expanded valves.                                                              |
| Seneca Lake, N. Y.             | Casts of a small left and a large right valve.                                                  |
| .....                          | Generic reference queried.                                                                      |
| Seneca Lake, N. Y.             | Cast of a pair of expanded valves. From “Baileytown.”                                           |
| Schoharie Co., N. Y.           | Casts of two left valves, one right valve and two pairs of expanded valves. From “Bear’s Gulf.” |
| Outlet of Lake Keuka,<br>N. Y. | Cast of a left valve.                                                                           |
| Ludlowville, N. Y.             | Cast of left valve with umbo cut away.                                                          |
| Seneca Lake, N. Y.             | Cast of right valve.                                                                            |
| Near Ithaca, N. Y.             | Cast of left valve. From the tunnel at Fall creek.                                              |
| Butternuts, N. Y.              | Internal cast of left valve in block with many others. Otsego county.                           |
| Leroy, Ohio.                   | Internal cast of individual. From the Erie shale.                                               |
| Seneca Lake, N. Y.             | A very perfect right valve and a larger exfoliated one.                                         |
| Onondaga Co., N. Y.            | Entire individual. From Pratt’s Falls.                                                          |
| Lake Erie, N. Y.               | Internal cast of left valve.                                                                    |
| Near Cumberland, Md.           | Left valve retaining internal cast of right valve.                                              |
| Stafford, N. Y.                | Cast of left valve retaining some test, beak missing.                                           |
| .....                          | Defined as a subgenus of <i>Solen</i> .                                                         |
| .....                          | As <i>Orthonota siliquoidea</i> .                                                               |
| .....                          | “ “ “                                                                                           |
| Schoharie Co., N. Y.           | “ <i>Solen (Palæosolen) siliquoidea</i> . Cast of right valve.                                  |
| Cumberland, Md.                | “ <i>Cardiola? radians</i> Con. Cast of individual, somewhat distorted.                         |
| “ “                            | Cast of individual.                                                                             |
| .....                          | As <i>Cardiola? hero</i> .                                                                      |
| Erie Co., N. Y.                | Cast of left valve. From the “Indian reservation.”                                              |
| Central New York.              | As <i>Cardiola? —</i> . Cast of a pair of expanded valves.                                      |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.                                                                                                                                                                                                                    | REFERENCE.                                             |                                        |                        |             |              |
|---------------|------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------|------------------------|-------------|--------------|
|               |                  |                     |                                                                                                                                                                                                                                               | Work.                                                  | Vol.                                   | P.                     | Pl.         | Figs.        |
| Ham.          | <u>4830</u><br>1 | Type.               | <b>Palæosolen</b> Hall— <i>Cont.</i><br>potens . . . . . Hall.                                                                                                                                                                                | Pal. N. Y.                                             | 5, pt. I                               | 422                    | 69          | 8, 10        |
| "             | <u>4830</u><br>2 | "                   | "<br>retusa . . . . . Hall.                                                                                                                                                                                                                   | " "                                                    | 5, pt. I,<br>Pl. & Ex.                 | ....                   | 69          | 8, 10        |
| Port.         | <u>4831</u><br>1 | "                   | "<br>robusta (Hall) . . . . Miller.<br>Hall.                                                                                                                                                                                                  | Am. P. F.<br>Pal. N. Y.                                | 5, pt. I,<br>Pl. & Ex.                 | 186<br>....            | 69<br>70    | 6<br>22, 24  |
| "             | <u>4831</u><br>2 | "                   | "<br>" . . . . . "                                                                                                                                                                                                                            | " "                                                    | 5, pt. I<br>5, pt. I                   | 424<br>424             | 70<br>70    | 22, 24<br>23 |
| "             | <u>4832</u><br>1 | "                   | <b>Paracardium</b> Barrande.<br>doris . . . . . Hall.                                                                                                                                                                                         | " "                                                    | 5, pt. I,<br>Pl. & Ex.                 | ....                   | 70          | 10, 11       |
|               |                  |                     | "<br>" . . . . . "                                                                                                                                                                                                                            | " "                                                    | 5, pt. I                               | 428                    | 70          | 10, 11       |
| U. H.         | <u>4002</u><br>2 | Gen. and Sp. Type.  | <b>Paracyclas</b> Hall.<br><i>elevata</i> . . . . .<br><i>elliptica</i> . . . . . Hall.                                                                                                                                                       | Geol. N. Y.<br>Pal. N. Y.                              | 4th D.<br>5, pt. I                     | 171<br>440             | ct 67<br>72 | 2<br>25, 26  |
| "             | <u>4002</u><br>1 | "                   | "<br>" . . . . . "                                                                                                                                                                                                                            | " "                                                    | 5, pt. I                               | 440                    | 72          | 23           |
| "             | <u>4002</u><br>2 | "                   | "<br>" . . . . . "                                                                                                                                                                                                                            | " "                                                    | 5, pt. I                               | 440                    | 72          | 29           |
| Ham.          | <u>4002</u><br>4 | "                   | "<br>" . . . . . "                                                                                                                                                                                                                            | " "                                                    | 5, pt. I<br>5, pt. I                   | 440<br>440             | 72<br>72    | 30<br>31-33  |
|               |                  |                     | H. & W.                                                                                                                                                                                                                                       | N. Y. S. M.                                            | 24                                     | 189                    | ....        | ....         |
| Ham.          | <u>4833</u><br>1 | Fig'd.              | <i>fissa</i> . . . . .<br><i>lirata</i> (Conrad) . . . . Hall.                                                                                                                                                                                | Pal. N. Y.                                             | 5, pt. I                               | 441                    | 72          | 3, 4         |
| "             | <u>4833</u><br>2 | "                   | "<br>" . . . . . "                                                                                                                                                                                                                            | " "                                                    | 5, pt. I                               | 441                    | 72          | 6, 15, 16    |
| "             | <u>4833</u><br>3 | "                   | "<br>" . . . . . "                                                                                                                                                                                                                            | " "                                                    | 5, pt. I                               | 441                    | 72          | 7-10         |
| Chem.         | <u>4834</u><br>1 | Type.               | ? pauper . . . . . Hall.                                                                                                                                                                                                                      | " "                                                    | 5, pt. I,<br>Pl. & Ex.                 | ....                   | 75          | 25           |
|               |                  |                     | "<br>" . . . . . "                                                                                                                                                                                                                            | " "                                                    | 5, pt. I                               | 446                    | 75<br>95    | 25<br>20     |
|               |                  |                     | <b>Pecten</b> Müller.<br><i>cancellatus</i> . . . . .<br><i>convexus</i> . . . . .<br><i>crenulatus</i> . . . . .<br><i>dolabriformis</i> . . . . .<br><i>duplicatus</i> . . . . .<br><i>Hallianus</i> . . . . .<br><i>striatus</i> . . . . . | ....                                                   | ....                                   | ....                   | ....        | ....         |
| Ham.          | <u>4835</u><br>1 | Fig'd Sp. and G. T. | <b>Pholadella</b> H. & W.<br><i>constricta</i> . . . . .<br><i>radiata</i> (Con.) H. & W.<br>Hall.                                                                                                                                            | P. N. L. S.<br>Pal. N. Y.                              | pt. 2<br>5, pt. I                      | 63<br>469              | 78          | 15, 17       |
| "             | <u>4835</u><br>2 | "                   | "<br>" . . . . . "                                                                                                                                                                                                                            | " "                                                    | 5, pt. I                               | 469                    | 78          | 19           |
| "             | <u>4835</u><br>3 | "                   | "<br>" . . . . . "                                                                                                                                                                                                                            | " "                                                    | 5, pt. I                               | 469                    | 78          | 21           |
| "             | <u>4836</u><br>1 | Type.               | <b>Phthonia</b> H. & W.<br><i>cylindrica</i> . . . . . Hall.                                                                                                                                                                                  | " "                                                    | 5, pt. I,<br>Pl. & Ex.                 | ....                   | 78          | 2            |
| "             | <u>4837</u><br>1 | "                   | "<br>" . . . . . "                                                                                                                                                                                                                            | " "                                                    | 5, pt. I                               | 473                    | 78          | 2            |
| "             | <u>4838</u><br>1 | Fig'd Sp. and G. T. | <i>nodicostata</i> . . . . H. & W.<br>Hall.<br><i>sectifrons</i> (Con.) H. & W.<br>Hall.                                                                                                                                                      | P. N. L. S.<br>Pal. N. Y.<br>P. N. L. S.<br>Pal. N. Y. | pt. 2<br>5, pt. I<br>pt. 2<br>5, pt. I | 71<br>474<br>70<br>474 | 78<br>78    | 6<br>10, 11  |
|               |                  |                     | <i>Pinnopsis</i> Hall . . . . .<br><i>acutirostra</i> . . . . .<br><i>ornata</i> . . . . .                                                                                                                                                    | ....                                                   | ....                                   | ....                   | ....        | ....         |



| LOCALITY.            | REMARKS.                                                                                            |
|----------------------|-----------------------------------------------------------------------------------------------------|
| Madison Co., N. Y.   | As <i>Cardiola ? radians</i> Conrad. Casts of two individuals.                                      |
| Cayuga Lake, N. Y.   | “ “ “ “ Cast of left valve.                                                                         |
| .....                | “ <i>Cardiopsis robusta</i> , nomen nudum.                                                          |
| .....                | “ <i>Cardiola ? robusta</i> .                                                                       |
| Below Portage, N. Y. | Casts of two opposite valves.                                                                       |
| Near Penn Yan, N. Y. | Cast of left valve.                                                                                 |
| .....                | As <i>Cardiola doris</i> .                                                                          |
| Cashaqua Creek, N.Y. | Casts of two opposite valves in same block.                                                         |
| .....                | See <i>Schizodus fissus</i> .                                                                       |
| LeRoy, N. Y.         | Cast of individual.                                                                                 |
| Clarence, N. Y.      | Cast of individual.                                                                                 |
| Western New York.    | Cast of individual.                                                                                 |
| LeRoy, N. Y.         | Cast of individual.                                                                                 |
| Falls of Ohio River. | As type of <i>Lucina (Paracyclas) elliptica</i> , var. <i>occidentalis</i> . Silicified individual. |
| .....                | See <i>Schizodus fissus</i> .                                                                       |
| Clarke Co., Ind.     | Two silicified individuals.                                                                         |
| Near Fultonham, N.Y. | Casts of one left and two right valves.                                                             |
| “ “ “                | Casts of two individuals.                                                                           |
| .....                | As <i>Cytherodon (Schizodus) pauper</i> .                                                           |
| Near Olean, N. Y.    | Cast of pair of expanded valves.                                                                    |
| .....                | See <i>Aviculopecten cancellatus</i> .                                                              |
| .....                | “ “ <i>convexus</i> .                                                                               |
| .....                | “ <i>Crenipecten crenulatus</i> and <i>C. amplus</i> .                                              |
| .....                | “ <i>Aviculopecten dolabriiformis</i> .                                                             |
| .....                | “ “ <i>duplicatus</i> .                                                                             |
| .....                | “ “ <i>cancellatus</i> .                                                                            |
| .....                | “ “ <i>striatus</i> .                                                                               |
| .....                | “ <i>Grammysia constricta</i> .                                                                     |
| Summit, N. Y.        | Casts of two opposite valves. Schoharie county.                                                     |
| Cazenovia, N. Y.     | Cast of an individual, compressed vertically.                                                       |
| Near Ithaca, N. Y.   | Cast of a right valve. From the “Inclined Plane.”                                                   |
| Cayuga Lake, N. Y.   | Cast of right valve.                                                                                |
| Near Oneonta, N. Y.  | Cast of right valve.                                                                                |
| Cazenovia, N. Y.     | Casts of two left valves.                                                                           |
| .....                | Synonym of <i>Lunulicardium</i> .                                                                   |
| .....                | See <i>Lunulicardium ornatum</i> .                                                                  |
| .....                | “ “ “                                                                                               |





| LOCALITY.                    | REMARKS.                                                                                                           |
|------------------------------|--------------------------------------------------------------------------------------------------------------------|
| .....                        | In the regular edition of Pal. N. Y., vol. 5, pt. 1, at page xiv, this is made a subgenus under <i>Mytilarca</i> . |
| .....                        | As <i>Mytilarca arenacea</i> .                                                                                     |
| Schoharie, N. Y.             | “ “ ( <i>Plethomytilus</i> ) <i>arenosa</i> , by error, in explanation of plate. Cast of right valve.              |
| .....                        | See <i>Plethomytilus arenaceus</i> .                                                                               |
| .....                        | As <i>Mytilarca oviformis</i> . Comments made.                                                                     |
| Port Deposit, N. Y.          | Cast of left valve. Cayuga Lake.                                                                                   |
| York, N. Y.                  | Cast of right valve.                                                                                               |
| Geneseo, N. Y.               | Compressed cast of pair of partly expanded valves.                                                                 |
| Seneca Lake, N. Y.           | Cast of right valve widened by compression.                                                                        |
| .....                        | As <i>Mytilarca ponderosa</i> .                                                                                    |
| .....                        | Made the type of the new genus <i>Plethomytilus</i> .                                                              |
| Clarence Hollow, N. Y.       | Cast of a small individual.                                                                                        |
| “ “                          | Casts of two left valves.                                                                                          |
| Near Dublin, O.              | Large right valve, mostly exfoliated.                                                                              |
| Columbus, O.                 | Internal cast of large individual.                                                                                 |
| .....                        | Synonym of <i>Conocardium</i> .                                                                                    |
| .....                        | See <i>Conocardium cuneus</i> , var. <i>trigonale</i> .                                                            |
| .....                        | As <i>Cardium</i> ? <i>vetustum</i> .                                                                              |
| Near Portland Harbor, N. Y.  | Casts of one left and two right valves.                                                                            |
| Fultonham, N. Y.             | Casts of a left valve and a pair of expanded valves.                                                               |
| Outlet of Lake Keuka, N. Y.  | Cast of pair of expanded valves. From “Lock No. 5.”                                                                |
| .....                        | See <i>Megambonia cardiiformis</i> .                                                                               |
| .....                        | As type of <i>Avicula pecteniformis</i> Hall.                                                                      |
| .....                        | Referred to present genus and species.                                                                             |
| Chemung Narrows, N. Y.       | Cast of left valve.                                                                                                |
| Chemung Upper Narrows, N. Y. | Casts of two opposite valves.                                                                                      |
| Chemung, N. Y.               | Cast of right valve.                                                                                               |
| Near Elmira, N. Y.           | Casts of two left valves.                                                                                          |
| Madison Co., N. Y.           | Casts of three left valves and an individual (figs. 2 and 10).                                                     |
| Worcester, N. Y.             | Internal cast of left valve.                                                                                       |
| Hamilton, N. Y.              | Cast of large right valve.                                                                                         |
| Onondaga Co., N. Y.          | Part of the internal cast of a right valve and the cardinal portion of a left valve. From Pratt's Falls.           |
| Otsego Co., N. Y.            | Internal cast of small individual.                                                                                 |
| Stafford, N. Y.              | Cast of left valve, somewhat imperfect.                                                                            |
| Otsego Co., N. Y.            | Internal cast of left valve.                                                                                       |
| Tully, Ohio.                 | Cast of left valve.                                                                                                |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.     | REFERENCE.  |                   |      |        |            |
|---------------|------------------|--------------------|--------------------------------|-------------|-------------------|------|--------|------------|
|               |                  |                    |                                | Work.       | Vol.              | P.   | Pl.    | Figs.      |
| Chem.         | $\frac{4845}{1}$ | Type.              | <b>Pterinea</b> Goldfuss—Cont. |             |                   |      |        |            |
|               |                  |                    | prora . . . . . Hall.          | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | .... | 16     | 4, 13      |
|               |                  |                    | “                              | N. Y. S. M. | 35                | 292  |        |            |
|               |                  |                    | “                              | Pal. N. Y.  | 5, pt. 1          | 102  | 16     | 4, 13      |
|               |                  |                    | reversa . . . . .              |             |                   |      |        |            |
| Chem.         | $\frac{4846}{1}$ | Type.              | “ var. avis . . . . .          |             |                   |      |        |            |
|               |                  |                    | rigida . . . . . Hall.         | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | .... | 16     | 5          |
|               |                  |                    | “                              | N. Y. S. M. | 35                | 292  |        |            |
|               |                  |                    | “                              | Pal. N. Y.  | 5, pt. 1          | 101  | 16     | 5          |
|               |                  |                    | “ . . . . . “                  | “ “         | 5, pt. 1          | 101  | 16     | 6          |
| Mar.          | $\frac{4387}{1}$ | Type.              | suborbicularis . . . . .       |             |                   |      |        |            |
|               |                  |                    | triquetra . . . . .            |             |                   |      |        |            |
|               |                  |                    | <b>Pterinopecten</b> Hall.     |             |                   |      |        |            |
|               |                  |                    | conspectus . . . . .           |             |                   |      |        |            |
|               |                  |                    | dignatus . . . . . Hall.       | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | .... | 1      | 12, 14, 15 |
| Ham.          | $\frac{4847}{1}$ | “                  | “                              | N. Y. S. M. | 35                | 262  |        |            |
|               |                  |                    | “                              | Pal. N. Y.  | 5, pt. 1          | 62   | 1      | 12, 14, 15 |
|               |                  |                    | exfoliatus . . . . . Hall.     | “ “         | 5, pt. 1, Pl.&Ex. | .... | 1      | 17         |
|               |                  |                    | “                              | N. Y. S. M. | 35                | 261  |        |            |
|               |                  |                    | “                              | Pal. N. Y.  | 5, pt. 1          | 61   | 1      | 17         |
| Chem.         | $\frac{4848}{1}$ | “                  | “                              | “ “         | 5, pt. 1, Pl.&Ex. | .... | 17     | 22         |
|               |                  |                    | filitextus . . . . . Hall.     | “ “         | 5, pt. 1, Pl.&Ex. | .... | 17     | 22         |
|               |                  |                    | “                              | N. Y. S. M. | 35                | 267  |        |            |
|               |                  |                    | “                              | Pal. N. Y.  | 5, pt. 1          | 67   | 17     | 22         |
|               |                  |                    | “                              | “ “         | 5, pt. 1, Pl.&Ex. | .... | 82     | 10         |
| U. H.         | $\frac{3091}{1}$ | “                  | imbecilis . . . . . Hall.      | “ “         | 5, pt. 1, Pl.&Ex. | .... | 24     | 1          |
|               |                  |                    | “                              | N. Y. S. M. | 35                | 272  |        |            |
|               |                  |                    | “                              | Pal. N. Y.  | 5, pt. 1          | 75   | 24     | 1          |
|               |                  |                    | insons . . . . . Hall.         | “ “         | 5, pt. 1, Pl.&Ex. | .... | 1      | 4          |
|               |                  |                    | “                              | N. Y. S. M. | 35                | 260  |        |            |
| Ham.          | $\frac{4850}{1}$ | “                  | “                              | Pal. N. Y.  | 5, pt. 1          | 59   | 1      | 4          |
|               |                  |                    | intermedius . . . . . Hall.    | N. Y. S. M. | 35                | 267  |        |            |
|               |                  |                    | “                              | Pal. N. Y.  | 5, pt. 1          | 68   | 17     | 19         |
|               |                  |                    | “                              | “ “         | 5, pt. 1, Pl.&Ex. | .... | 17     | 19         |
|               |                  |                    | “                              | “ “         | 5, pt. 1, Pl.&Ex. | .... | 17     | 19         |
| Mar.          | $\frac{4386}{1}$ | “                  | lætus . . . . . Hall.          | N. Y. S. M. | 35                | 263  |        |            |
|               |                  |                    | “                              | Pal. N. Y.  | 5, pt. 1          | 63   | 1      | 13         |
|               |                  |                    | “                              | “ “         | 5, pt. 1, Pl.&Ex. | .... | 1      | 13         |
|               |                  |                    | lautus . . . . .               |             |                   |      |        |            |
|               |                  |                    | multiradiatus . . . . . Hall.  | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | .... | 1      | 6, 7       |
| Chem.         | $\frac{4851}{1}$ | “                  | “                              | N. Y. S. M. | 35                | 259  |        |            |
|               |                  |                    | “                              | Pal. N. Y.  | 5, pt. 1          | 57   | 1      | 6, 7       |
|               |                  |                    | suborbicularis . . . . . Hall. | Geol. N. Y. | 4th D.            | 264  | ct 119 | 1          |
|               |                  |                    | “                              | N. Y. S. M. | 35                | 276  |        |            |
|               |                  |                    | “                              | Pal. N. Y.  | 5, pt. 1          | 80   | 8      | 2          |
| Ham.          | $\frac{4852}{1}$ | Gen. and Sp. Type. | terminalis . . . . .           |             |                   |      |        |            |
|               |                  |                    | undosus . . . . . Hall.        | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | .... | 2      | 15         |
|               |                  |                    | “                              | N. Y. S. M. | 35                | 270  |        |            |
|               |                  |                    | “                              | Pal. N. Y.  | 5, pt. 1          | 72   | 2      | 15         |
|               |                  |                    | (Hall) Miller.                 | Am. P. F.   | .....             | 185  |        |            |



| LOCALITY.                                              | REMARKS.                                                                                                                                                    |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Near Elmira, N. Y.<br>.....<br>.....                   | Cast of right valve and imprint of left valve retaining part of internal cast. From "Buck's quarry."<br>See <i>Vertumnia reversa</i> .<br>" " <i>avis</i> . |
| Near Elmira, N. Y.<br>Chemung, N. Y.<br>.....<br>..... | Cast of left valve.<br>Cast of left valve.<br><br>See <i>Pterinopecten suborbicularis</i> .<br>" <i>Gosseletia triquetra</i> .                              |
| .....                                                  | See <i>Pterinopecten intermedius</i> .                                                                                                                      |
| Bloomfield, N. Y.                                      | Casts of two left valves and a pair of expanded valves.                                                                                                     |
| Vienna, N. Y.                                          | Much exfoliated left valve. Ontario county.                                                                                                                 |
| Pine Valley, N. Y.                                     | Right valve, imbedded. From a boulder. Chemung county.                                                                                                      |
| Tioga, Pa.                                             | Cast of left valve.                                                                                                                                         |
| Western New York.                                      | Partly exfoliated left valve, imbedded.                                                                                                                     |
| Cayuga Lake, N. Y.                                     | As one of the types of <i>Pterinopecten conspectus</i> . Cast of left valve.                                                                                |
| Bloomfield, N. Y.<br>.....                             | As <i>Pterinopecten lautus</i> (typographical error). Cast of left valve.<br>See <i>Pterinopecten lætus</i> .                                               |
| Stafford, N. Y.<br>.....                               | Cast of left valve and its matrix.<br>As <i>Pterinea?</i> <i>suborbicularis</i> .                                                                           |
| Allegany Co., N. Y.<br>.....                           | Cast of left valve. From "Hobbieville."<br>See <i>Aviculopecten</i> ( <i>Pterinopecten?</i> ) <i>terminalis</i> .                                           |
| Near Covington, N. Y.                                  | As <i>Aviculopecten undulatus</i> , nomen nudum. Cast of right valve.                                                                                       |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                     | REFERENCE.  |                     |       |       |         |
|---------------|------------------|--------------------|----------------------------------------------------------------|-------------|---------------------|-------|-------|---------|
|               |                  |                    |                                                                | Work.       | Vol.                | P.    | Pl.   | Figs.   |
| Ham.          | <u>4853</u><br>1 | Gen. and Sp. Type. | <b>Pterinopecten</b> Hall— <i>Cont.</i><br>vertumnus.....Hall. | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | ..... | 5     | 1, 5, 7 |
|               |                  |                    | “                                                              | N. Y. S. M. | 35                  | 269   |       |         |
| “             | <u>4853</u><br>2 | “                  | “                                                              | Pal. N. Y.  | 5, pt. 1            | 71    | 5     | 1, 5, 7 |
|               |                  |                    | “                                                              | “           | 5, pt. 1            | 71    | 5     | 2, 3, 8 |
|               |                  |                    | <b>Pteronites</b> McCoy.<br><i>decussata</i> .....             |             |                     |       |       |         |
| Chem.         | <u>4854</u><br>1 | Type.              | rostratus.....Hall.                                            | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | ..... | 22    | 24      |
|               |                  |                    | “                                                              | N. Y. S. M. | 35                  | 396   |       |         |
|               |                  |                    | “                                                              | Pal. N. Y.  | 5, pt. 1            | 238   | 22    | 24      |
|               |                  |                    | <i>subdecussata</i> .....                                      |             |                     |       |       |         |
|               |                  |                    | <b>Ptychodesma</b> H. & W.<br>minor.....Hall.                  | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | ..... | 41    | 27      |
|               |                  |                    | “                                                              | “           | 5, pt. 1            | 353   | 41    | 27      |
|               |                  |                    | <b>Sanguinolites</b> McCoy.<br><i>acutus</i> .....             |             |                     |       |       |         |
|               |                  |                    | <i>glaucus</i> .....                                           |             |                     |       |       |         |
|               |                  |                    | <i>ponderosus</i> .....                                        |             |                     |       |       |         |
|               |                  |                    | <i>rigidus</i> .....                                           |             |                     |       |       |         |
|               |                  |                    | <i>solenoides</i> .....                                        |             |                     |       |       |         |
|               |                  |                    | <i>subtortuosus</i> .....                                      |             |                     |       |       |         |
|               |                  |                    | <i>truncatus</i> .....                                         |             |                     |       |       |         |
|               |                  |                    | <i>undatus</i> .....                                           |             |                     |       |       |         |
| Chem.         | <u>4856</u><br>1 | Type.              | ? undulatus....H. & W.                                         | P. N. L. S. | pt. 2               | 91    | ..... | .....   |
|               |                  |                    | Hall.                                                          | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | ..... | 64    | 1       |
|               |                  |                    | “                                                              | “           | 5, pt. 1            | 508   | 64    | 1       |
|               |                  |                    | <i>ventricosus</i> .....                                       |             |                     |       |       |         |
|               |                  |                    | <b>Schizodus</b> King.<br>appressus (Con.) H. & W.             | P. N. L. S. | pt. 2               | 95    |       |         |
| Ham.          | <u>4857</u><br>1 | Fig'd.             | Hall.                                                          | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | ..... | 75    | 3       |
|               |                  |                    | “                                                              | “           | 5, pt. 1            | 449   | 75    | 3       |
| “             | <u>4857</u><br>2 | “                  | “                                                              | “           | 5, pt. 1, Pl. & Ex. | ..... | 75    | 4, 9    |
|               |                  |                    | “                                                              | “           | 5, pt. 1            | 449   | 75    | 4, 9    |
| “             | <u>4857</u><br>3 | “                  | “                                                              | “           | 5, pt. 1, Pl. & Ex. | ..... | 75    | 5-7     |
|               |                  |                    | “                                                              | “           | 5, pt. 1            | 449   | 75    | 5-7     |
| “             | <u>4857</u><br>4 | “                  | “                                                              | “           | 5, pt. 1, Pl. & Ex. | ..... | 75    | 8       |
|               |                  |                    | “                                                              | “           | 5, pt. 1            | 449   | 75    | 8       |
| Chem.         | <u>4858</u><br>1 | “                  | chemungensis (Con.)<br>H. & W.                                 | P. N. L. S. | pt. 2               | 96    |       |         |
|               |                  |                    | Hall.                                                          | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | ..... | 75    | 37      |
|               |                  |                    | “                                                              | “           | 5, pt. 1            | 453   | 75    | 37      |
| “             | <u>4858</u><br>2 | “                  | “                                                              | “           | 5, pt. 1, Pl. & Ex. | ..... | 75    | 38, 39  |
|               |                  |                    | “                                                              | “           | 5, pt. 1            | 453   | 75    | 38, 39  |
| “             | <u>4858</u><br>1 | “                  | “                                                              | N. Y. S. M. | 23                  | ..... | 14    | 20      |
|               |                  |                    | “                                                              | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | ..... | 75    | 40      |
|               |                  |                    | “                                                              | “           | 5, pt. 1            | 453   | 75    | 40      |
| “             | <u>4858</u><br>3 | “                  | “ H. & W.                                                      | P. N. L. S. | pt. 2               | 97    | ..... | .....   |
|               |                  |                    | Hall.                                                          | Pal. N. Y.  | 5, pt. 1, Pl. & Ex. | ..... | 75    | 45      |
|               |                  |                    | “                                                              | “           | 5, pt. 1            | 453   | 75    | 45      |



| LOCALITY.                                       | REMARKS.                                                                                                                                                            |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Summit, N. Y.<br>Near Fultonham, N. Y.<br>..... | Imprints of three pairs of expanded valves. Schoharie county.<br>Casts of two left valves and a pair of expanded valves.<br><br>See <i>Actinopteria decussata</i> . |
| Rockville, N. Y.<br>.....                       | Cast of left valve. Allegany county.<br>See <i>Actinopteria subdecussata</i> .                                                                                      |
| .....<br>Near Elmira, N. Y.<br>.....            | Doubtfully referred to this genus.<br>Cast of right valve.<br><br>See <i>Goniophora acuta</i> .                                                                     |
| .....                                           | “ “ <i>glauc</i> a.                                                                                                                                                 |
| .....                                           | “ <i>Modiomorpha ponderosa</i> .                                                                                                                                    |
| .....                                           | “ <i>Sphenotus contractus</i> .                                                                                                                                     |
| .....                                           | “ “ <i>solenoides</i> .                                                                                                                                             |
| .....                                           | “ “ <i>subtortuosus</i> .                                                                                                                                           |
| .....                                           | “ “ <i>truncatus</i> and <i>Orthonota parvula</i> .                                                                                                                 |
| .....                                           | “ “ <i>rigida</i> .                                                                                                                                                 |
| .....                                           | As <i>Edmondia undulata</i> .                                                                                                                                       |
| .....                                           | “ “ “                                                                                                                                                               |
| Cattaraugus Co., N. Y.<br>.....                 | Cast of right valve. From one-half mile south of Great Valley.<br>See <i>Spathella typica</i> .                                                                     |
| .....                                           | As <i>Cytherodon (Schizodus) appressus</i> .                                                                                                                        |
| Pratt's Falls, N. Y.<br>.....                   | Internal cast of right valve. Onondaga county.<br>As <i>Cytherodon (Schizodus) appressus</i> .                                                                      |
| Schoharie Co., N. Y.<br>.....                   | Casts of two opposite valves.<br>As <i>Cytherodon (Schizodus) appressus</i> .                                                                                       |
| Cayuga Lake, N. Y.<br>.....                     | Casts of a pair of expanded valves and two opposite, separate valves.<br>From “Ogden's Ferry.”<br>As <i>Cytherodon (Schizodus) appressus</i> .                      |
| Summit, N. Y.                                   | Cast of small right valve. Schoharie county.                                                                                                                        |
| .....                                           | As <i>Cytherodon (Schizodus) chemungensis</i> .                                                                                                                     |
| Tioga Co., N. Y.<br>.....                       | Cast of right valve in block with original of fig. 40, same plate.<br>From three miles north of Factoryville.<br>As <i>Cytherodon (Schizodus) chemungensis</i> .    |
| Near Ithaca, N. Y.<br>.....                     | Casts of a pair of expanded valves and a left valve.<br>As <i>Cytherodon appressus</i> Conrad.                                                                      |
| .....                                           | As <i>Cytherodon (Schizodus) chemungensis</i> .                                                                                                                     |
| Tioga Co., N. Y.<br>.....                       | Cast of left valve in block with original of fig. 37, same plate.<br>From three miles north of Factoryville.<br>As <i>Schizodus oblat</i> us, nomen nudum.          |
| .....                                           | “ <i>Cytherodon (Schizodus) oblat</i> us, type.                                                                                                                     |
| Cortland, N. Y.                                 | Cast of left valve.                                                                                                                                                 |







Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.       | REFERENCE.  |                   |       |        |         |
|---------------|------------------|---------------------|----------------------------------|-------------|-------------------|-------|--------|---------|
|               |                  |                     |                                  | Work.       | Vol.              | P.    | Pl.    | Figs.   |
| Ham.          | $\frac{4866}{1}$ | Fig'd.              | <b>Sphenotus</b> Hall—Continued. |             |                   |       |        |         |
|               |                  |                     | cuneatus (Con.) H. & W.          | P. N. L. S. | pt. 2             | 39    | .....  | .....   |
|               |                  |                     | Hall.                            | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | ....  | 65     | 13-17   |
|               |                  |                     | "                                | " "         | 5, pt. 1          | 396   | 65     | 13-17   |
| "             | $\frac{4867}{1}$ | Type.               | solenoides.....H. & W.           | P. N. L. S. | pt. 2             | 38    | .....  | .....   |
|               |                  |                     | Hall.                            | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | ....  | 65     | 25, 26  |
|               |                  |                     | "                                | " "         | 5, pt. 1          | 398   | 65     | 25, 26  |
| "             | $\frac{4868}{1}$ | "                   | subtortuosus...H. & W.           | P. N. L. S. | pt. 2             | 41    | .....  | .....   |
|               |                  |                     | Hall.                            | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | ....  | 65     | 18      |
|               |                  |                     | "                                | " "         | 5, pt. 1          | 397   | 65     | 18      |
| "             | $\frac{4869}{1}$ | Fig'd.              | truncatus (Con.) H. & W.         | P. N. L. S. | pt. 2             | 42    | .....  | .....   |
|               |                  |                     | Hall.                            | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | ....  | 65     | 1, 4, 6 |
|               |                  |                     | "                                | " "         | 5, pt. 1          | 394   | 65     | 1, 4, 6 |
|               |                  |                     | <b>Tellina</b> Linné.            |             |                   |       |        |         |
|               |                  |                     | ovata.....                       | .....       | .....             | ..... | .....  | .....   |
| Ham.          | $\frac{4870}{1}$ | Fig'd Sp. and G. T. | <b>Tellinopsis</b> H. & W.       |             |                   |       |        |         |
|               |                  |                     | subemarginata (Con.)             |             |                   |       |        |         |
|               |                  |                     | H. & W.                          | P. N. L. S. | pt. 2             | 80    |        |         |
|               |                  |                     | Hall.                            | Pal. N. Y.  | 5, pt. 1          | 464   | 76     | 22, 28  |
| "             | $\frac{4870}{2}$ | "                   | " " "                            | " "         | 5, pt. 1          | 464   | 76     | 23      |
|               |                  |                     | " " "                            | " "         | 5, pt. 1          | 464   | 76     | 25      |
|               |                  |                     | " " "                            | " "         | 5, pt. 1          | 464   | 76     | 25      |
| Port.         | $\frac{4871}{1}$ | Type.               | <b>Ungulina</b> Daudin.          |             |                   |       |        |         |
|               |                  |                     | suborbicularis.....Hall.         | Geol. N. Y. | 4th D.            | 244   | ct.106 | 2       |
| Chem.         | $\frac{4872}{1}$ | "                   | <b>Vertumnia</b> Hall.....       | .....       | .....             | ..... | .....  | .....   |
|               |                  |                     | avis.....Hall.                   | Pal. N. Y.  | 5, pt. 1          | 105   | 24     | 9, 13   |
|               |                  |                     | "                                | " "         | 5, pt. 1, Pl.&Ex. | ....  | 24     | 9, 13   |
|               |                  |                     | reversa.....Hall.                | " "         | 5, pt. 1, Pl.&Ex. | ....  | 24     | 6       |
|               |                  |                     | "                                | " "         | 5, pt. 1          | 104   | 24     | 6       |
|               |                  |                     | "                                | " "         | 5, pt. 1, Pl.&Ex. | ....  | 84     | 24      |
| "             | $\frac{4873}{2}$ | "                   | "                                | " "         | 5, pt. 1, Pl.&Ex. | ....  | 24     | 12      |
|               |                  |                     | "                                | " "         | 5, pt. 1          | 104   | 24     | 12      |

Class GASTROPODA.

|       |                  |       |                                |             |          |       |       |       |
|-------|------------------|-------|--------------------------------|-------------|----------|-------|-------|-------|
|       |                  |       | <i>Acroculia</i> Phillips..... | .....       | .....    | ..... | ..... | ..... |
|       |                  |       | <i>erecta</i> .....            | .....       | .....    | ..... | ..... | ..... |
| Ham.  | $\frac{4875}{1}$ | Type. | <b>Bellerophon</b> Montfort.   |             |          |       |       |       |
|       |                  |       | acutilira.....Hall.            | N. Y. S. M. | 15       | 56    |       |       |
|       |                  |       | "                              | I. D. F.    | Gast.    | ....  | 25    | 8     |
|       |                  |       | "                              | Pal. N. Y.  | 5, pt. 2 | 106   | 25    | 4     |
|       |                  |       | "                              | I. D. F.    | Gast.    | ....  | 25    | 9     |
|       |                  |       | "                              | Pal. N. Y.  | 5, pt. 2 | 106   | 26    | 13    |
|       |                  |       | "                              | " "         | 5, pt. 2 | 106   | 25    | 5     |
|       |                  |       | "                              | I. D. F.    | Gast.    | ....  | 25    | 19-21 |
| "     | $\frac{4875}{2}$ | "     | "                              | Pal. N. Y.  | 5, pt. 2 | 106   | 25    | 6-8   |
|       |                  |       | crenistria.....Hall.           | I. D. F.    | Gast.    | ....  | 25    | 12    |
|       |                  |       | "                              | Pal. N. Y.  | 5, pt. 2 | 116   | 25    | 17    |
|       |                  |       | "                              | "           | "        | "     | "     | "     |
| U. H. | $\frac{4042}{1}$ | "     | curvilineatus.....Conrad.      | J. A. N. S. | 8        | 269   | 16    | 7     |
|       |                  |       | Hall.                          | I. D. F.    | Gast.    | ....  | 25    | 28    |
|       |                  |       | "                              | Pal. N. Y.  | 5, pt. 2 | 94    | 22    | 1     |



| LOCALITY.                    | REMARKS.                                                                                              |
|------------------------------|-------------------------------------------------------------------------------------------------------|
| .....                        | As <i>Sanguinolites cuneatus</i> .                                                                    |
| .....                        | “ “ “                                                                                                 |
| Near Fultonham, N. Y.        | Casts of one left valve, two right valves and two pairs of expanded valves. From “Bear’s Gulf.”       |
| .....                        | As <i>Sanguinolites solenoides</i> .                                                                  |
| .....                        | “ “ “                                                                                                 |
| Canandaigua L., N. Y.        | Cast of individual, somewhat imperfect.                                                               |
| .....                        | As <i>Sanguinolites subtortuosus</i> .                                                                |
| .....                        | “ “ “                                                                                                 |
| Near Fultonham, N. Y.        | Cast of left valve. From “Bear’s Gulf.”                                                               |
| .....                        | As <i>Sanguinolites truncatus</i> .                                                                   |
| .....                        | “ “ “                                                                                                 |
| Near Fultonham, N. Y.        | Casts of two opposite valves and of a pair of partly expanded valves. From “Bear’s Gulf.”             |
| .....                        | See <i>Palæoneilo maxima</i> .                                                                        |
| Cayuga Lake, N. Y.           | Casts of two left valves.                                                                             |
| Smyrna, N. Y.                | Cast of right valve, in block with original of fig. 3, pl. 20, same vol., <i>Leiopteria Bigsbyi</i> . |
| Ludlowville, N. Y.           | Cast of small right valve.                                                                            |
| Cashaqua Creek, N. Y.        | Cast of left valve and its imprint. From “Shakers’ Mill.”                                             |
| .....                        | Defined as a subgenus of <i>Pterinea</i> .                                                            |
| Near Elmira, N. Y.           | As <i>Pterinea reversa</i> , var. <i>avis</i> . Imprint of two opposite valves.                       |
| .....                        | “ “ “                                                                                                 |
| Elmira, N. Y.                | Cast of right valve.                                                                                  |
| .....                        | As <i>Pterinea reversa</i> .                                                                          |
| Chemung Upper Narrows, N. Y. | Cast of pair of expanded valves.                                                                      |
| .....                        |                                                                                                       |
| .....                        | Synonym of <i>Platyceras</i> .                                                                        |
| .....                        | See <i>Platyceras erectum</i> .                                                                       |
| Hamilton, N. Y.              | A cast somewhat distorted by pressure.                                                                |
| .....                        | Doubtfully referred to this species.                                                                  |
| Hamilton, N. Y.              | A somewhat crushed cast evidently used for lower outline.                                             |
| Near Delphi, N. Y.           | Cast preserving shell in part. From Pratt’s Falls.                                                    |
| .....                        | As <i>Cyrtolites mitella</i> , by error.                                                              |
| Near Delphi, N. Y.           | Nearly entire individual preserving shell. From Pratt’s Falls.                                        |
| Livingston Co., N. Y.        | An imbedded individual.                                                                               |
| Schoharie Co., N. Y.         | A small individual.                                                                                   |

## Class GASTROPODA—Continued.

| Geol. Subdiv.                     | Cat. No.          | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.           | REFERENCE.  |          |      |        |          |
|-----------------------------------|-------------------|--------------------|--------------------------------------|-------------|----------|------|--------|----------|
|                                   |                   |                    |                                      | Work.       | Vol.     | P.   | Pl.    | Figs.    |
| <b>Bellerophon</b> Montfort—Cont. |                   |                    |                                      |             |          |      |        |          |
| Ham.                              | $\frac{4877}{1}$  | Type.              | leda ..... Hall.                     | N. Y. S. M. | 15       | 58   |        |          |
|                                   |                   |                    | "                                    | I. D. F.    | Gast.    | .... | 24     | 8        |
| "                                 | $\frac{4877}{2}$  | "                  | " ..... "                            | Pal. N. Y.  | 5, pt. 2 | 110  | 23     | 5        |
|                                   |                   |                    | "                                    | I. D. F.    | Gast.    | .... | 24     | 11-13    |
|                                   |                   |                    | "                                    | Pal. N. Y.  | 5, pt. 2 | 110  | 23     | 14-16    |
| Chem.                             | $\frac{4878}{1}$  | "                  | mæra ..... Hall.                     | I. D. F.    | Gast.    | .... | 22     | 7        |
|                                   |                   |                    | "                                    | Pal. N. Y.  | 5, pt. 2 | 119  | 25     | 9        |
| Ham.                              | $\frac{4879}{1}$  | "                  | natator ..... Hall.                  | N. Y. S. M. | 15       | 60   | ....   | ....     |
|                                   |                   |                    | "                                    | I. D. F.    | Gast.    | .... | 23     | 12       |
|                                   |                   |                    | "                                    | Pal. N. Y.  | 5, pt. 2 | 108  | 24     | 1        |
| U. H.                             | $\frac{4237}{1}$  | Fig'd.             | Newberryi (Meek) Hall.               | " "         | 5, pt. 2 | 97   | 22     | 15, 16   |
|                                   |                   |                    | "                                    | I. D. F.    | Gast.    | .... | 22     | 1, 2     |
| Ham.                              | $\frac{4880}{1}$  | Type.              | patulus ..... Hall.                  | N. Y. S. M. | 15       | 57   |        |          |
|                                   |                   |                    | "                                    | I. D. F.    | Gast.    | .... | 23     | 4        |
|                                   |                   |                    | "                                    | Pal. N. Y.  | 5, pt. 2 | 100  | 22     | 25       |
| "                                 | $\frac{4880}{2}$  | "                  | " ..... "                            | I. D. F.    | Gast.    | .... | 23     | 5        |
|                                   |                   |                    | "                                    | Pal. N. Y.  | 5, pt. 2 | 100  | 22     | 21       |
| "                                 | $\frac{4880}{3}$  | "                  | " ..... "                            | I. D. F.    | Gast.    | .... | 23     | 8        |
|                                   |                   |                    | "                                    | Pal. N. Y.  | 5, pt. 2 | 100  | 22     | 24       |
| U. H.                             | $\frac{2869}{3}$  | "                  | pelops ..... Hall.                   | N. Y. S. M. | 15       | 56   | ....   | ....     |
|                                   |                   |                    | "                                    | I. D. F.    | Gast.    | .... | 22     | 3-5      |
|                                   |                   |                    | "                                    | Pal. N. Y.  | 5, pt. 2 | 95   | 22     | 7-9      |
| "                                 | $\frac{2869}{2}$  | "                  | " ..... "                            | I. D. F.    | Gast.    | .... | 25     | 1, 2     |
|                                   |                   |                    | "                                    | Pal. N. Y.  | 5, pt. 2 | 95   | 22     | 11, 12   |
| Ham.                              | $\frac{2869}{4}$  | "                  | " ..... "                            | I. D. F.    | Gast.    | .... | 25     | 3, 3a    |
|                                   |                   |                    | "                                    | Pal. N. Y.  | 5, pt. 2 | 95   | 22     | 10, 13   |
| U. H.                             | $\frac{2869a}{2}$ | "                  | " var. exponens Hall.                | " "         | 5, pt. 2 | 96   | 22     | 14       |
|                                   |                   |                    | "                                    | I. D. F.    | Gast.    | .... | 25     | 4        |
| Port.                             | $\frac{4881}{1}$  | Fig'd.             | striatus (Bronn) .... Hall.          | Geol. N. Y. | 4th D.   | 246  | ct 107 | 7        |
| Ham.                              | $\frac{4882}{1}$  | Type.              | thalia ..... Hall.                   | N. Y. S. M. | 15       | 60   |        |          |
|                                   |                   |                    | "                                    | I. D. F.    | Gast.    | .... | 25     | 7        |
|                                   |                   |                    | "                                    | Pal. N. Y.  | 5, pt. 2 | 105  | 25     | 3        |
|                                   |                   |                    | tricarinata Hall (non Shumard) ..... |             |          |      |        |          |
| Chem.                             | $\frac{4883}{1}$  | Type.              | triliratus ..... Hall.               | Pal. N. Y.  | 5, pt. 2 | 117  | 24     | 2, 16-19 |
|                                   |                   |                    | "                                    | I. D. F.    | Gast.    | .... | 22     | 15-19    |
| <b>Callonema</b> Hall.            |                   |                    |                                      |             |          |      |        |          |
| U. H.                             | $\frac{4233}{2}$  | Gen. and Sp. Type. | bellatulum ..... Hall.               | N. Y. S. M. | 14       | 104  | ....   | ....     |
|                                   |                   |                    | "                                    | " "         | 27       | .... | 13     | 12       |
|                                   |                   |                    | "                                    | I. D. F.    | Gast.    | .... | 14     | 15       |
|                                   |                   |                    | "                                    | Pal. N. Y.  | 5, pt. 2 | 51   | 14     | 15       |
| "                                 | $\frac{4233}{1}$  | "                  | " ..... "                            | I. D. F.    | Gast.    | .... | 14     | 10-14    |
|                                   |                   |                    | "                                    | Pal. N. Y.  | 5, pt. 2 | 51   | 14     | 10-14    |
| "                                 | $\frac{4229}{1}$  | Type.              | imitator ..... H. & W.               | N. Y. S. M. | 24       | 195  | ....   | ....     |
|                                   |                   |                    | Hall.                                | " "         | 27       | .... | 13     | 9        |
|                                   |                   |                    | "                                    | I. D. F.    | Gast.    | .... | 14     | 16       |
|                                   |                   |                    | "                                    | Pal. N. Y.  | 5, pt. 2 | 53   | 14     | 16       |
| "                                 | $\frac{4028}{1}$  | "                  | lichas ..... Hall.                   | N. Y. S. M. | 14       | 106  | ....   | ....     |
|                                   |                   |                    | "                                    | I. D. F.    | Gast.    | .... | 12     | 19-21    |
|                                   |                   |                    | "                                    | Pal. N. Y.  | 5, pt. 2 | 52   | 12     | 19-21    |
| "                                 | $\frac{4028}{3}$  | "                  | " ..... "                            | I. D. F.    | Gast.    | .... | 12     | 22       |
|                                   |                   |                    | "                                    | Pal. N. Y.  | 5, pt. 2 | 52   | 12     | 22       |
| <b>Cyclonema</b> Hall.            |                   |                    |                                      |             |          |      |        |          |
| Scho.                             | $\frac{2868}{2}$  | "                  | doris ..... Hall.                    | N. Y. S. M. | 15       | 43   | ....   | ....     |
|                                   |                   |                    | "                                    | I. D. F.    | Gast.    | .... | 19     | 1        |
|                                   |                   |                    | "                                    | Pal. N. Y.  | 5, pt. 2 | 34   | 19     | 1        |



| LOCALITY.              | REMARKS.                                                                                     |
|------------------------|----------------------------------------------------------------------------------------------|
| 18 Mile Creek, N. Y.   | Nearly entire individual, imbedded. From the lake shore.                                     |
| Western New York.      | Two individuals, imbedded.                                                                   |
| Rockville, N. Y.       | Cast, somewhat crushed.                                                                      |
| .....                  | As <i>Phragmostoma natator</i> .                                                             |
| .....                  | “ “ “                                                                                        |
| Chenango Co., N. Y.    | Fragment of peristome.                                                                       |
| Near Dublin, Ohio.     | As <i>Bellerophon patulus</i> Hall. A silicified individual, nearly entire.                  |
| .....                  | “ “ ( <i>Phragmostoma?</i> ) <i>patulus</i> .                                                |
| Hamilton, N. Y.        | Nearly entire individual.                                                                    |
| .....                  | As <i>Bellerophon</i> ( <i>Phragmostoma?</i> ) <i>patulus</i> .                              |
| West Hamilton, N. Y.   | Somewhat flattened individual.                                                               |
| .....                  | As <i>Bellerophon</i> ( <i>Phragmostoma?</i> ) <i>patulus</i> .                              |
| Lake Erie, N. Y.       | Cast. Probably from near 18 Mile Creek. See also <i>Bellerophon Newberryi</i> .              |
| .....                  | As <i>Bellerophon</i> ( <i>Bucania</i> ) <i>pelops</i> .                                     |
| Near Dublin, Ohio.     | Two nearly entire, silicified individuals.                                                   |
| Clarence Hollow, N. Y. | Internal cast.                                                                               |
| Near Delphi, N. Y.     | Internal cast.                                                                               |
| Clarence Hollow, N. Y. | As <i>Bellerophon pelops?</i> Internal cast.                                                 |
| Near Portland, N. Y.   | Imbedded. From shore of the lake six miles northeast of the harbor.                          |
| York, N. Y.            | Internal cast, somewhat compressed.                                                          |
| .....                  | See <i>Bellerophon triliratus</i> .                                                          |
| Painted Post, N. Y.    | As types of <i>Bellerophon</i> ( <i>Phragmostoma?</i> ) <i>tricarinata</i> Hall. Four casts. |
| .....                  | As <i>Loxonema bellatula</i> .                                                               |
| .....                  | “ <i>Isonema</i> “                                                                           |
| .....                  | “ “ “                                                                                        |
| Near Louisville, Ky.   | A large, silicified individual.                                                              |
| .....                  | As <i>Isonema bellatula</i> .                                                                |
| Near Dublin, Ohio.     | Four silicified individuals.                                                                 |
| .....                  | As <i>Pleurotomaria imitator</i> .                                                           |
| .....                  | “ “ ( <i>Isonema</i> ) <i>imitator</i> .                                                     |
| .....                  | “ “ “ “                                                                                      |
| Falls of Ohio River.   | Cast retaining part of shell.                                                                |
| .....                  | As <i>Platyostoma lichas</i> .                                                               |
| .....                  | “ <i>Isonema</i> “                                                                           |
| Clarence Hollow, N. Y. | Two internal casts preserving some shell.                                                    |
| .....                  | As <i>Isonema lichas</i> .                                                                   |
| Near Columbus, Ohio.   | Internal cast.                                                                               |
| .....                  | As <i>Pleurotomaria doris</i> .                                                              |
| .....                  | “ “ “                                                                                        |
| Schoharie, N. Y.       | Internal cast retaining some shell.                                                          |

## Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.        | REFERENCE.  |          |      |     |        |
|---------------|------------------|--------------------|-----------------------------------|-------------|----------|------|-----|--------|
|               |                  |                    |                                   | Work.       | Vol.     | P.   | Pl. | Figs.  |
| Ham.          | $\frac{4884}{1}$ | Type.              | <b>Cyclonema</b> Hall—Cont.       |             |          |      |     |        |
|               |                  |                    | hamiltoniæ . . . . . Hall.        | N. Y. S. M. | 15       | 47   |     |        |
|               | $\frac{4884}{2}$ | “                  | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 12  | 34     |
|               |                  |                    | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 37   | 12  | 34     |
|               | $\frac{4885}{1}$ | “                  | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 12  | 36     |
|               |                  |                    | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 37   | 12  | 36     |
|               | $\frac{4886}{1}$ | “                  | liratum . . . . . Hall.           | N. Y. S. M. | 15       | 47   |     |        |
|               |                  |                    | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 12  | 29     |
|               | $\frac{4886}{1}$ | “                  | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 35   | 12  | 29     |
|               |                  |                    | multilira . . . . . Hall.         | N. Y. S. M. | 15       | 48   |     |        |
| Orisk.        | $\frac{2696}{1}$ | “                  | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 12  | 29     |
|               |                  |                    | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 36   | 12  | 30-33  |
|               | $\frac{2696}{1}$ | “                  | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 12  | 30-33  |
|               |                  |                    | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 36   | 12  | 30-33  |
|               | $\frac{2696}{1}$ | “                  | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 12  | 30-33  |
|               |                  |                    | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 36   | 12  | 30-33  |
|               | $\frac{2696}{1}$ | “                  | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 12  | 30-33  |
|               |                  |                    | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 36   | 12  | 30-33  |
|               | $\frac{2696}{1}$ | “                  | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 12  | 30-33  |
|               |                  |                    | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 36   | 12  | 30-33  |
| Ham.          | $\frac{4887}{1}$ | Gen. and Sp. Type. | <b>Cyrtolites</b> Conrad.         |             |          |      |     |        |
|               |                  |                    | ? expansus . . . . . Hall.        | “           | “        | 3    | 479 | 114    |
|               | $\frac{4887}{2}$ | “                  | mitella . . . . .                 | “           | “        | “    | “   | “      |
|               |                  |                    | pileolus . . . . .                | “           | “        | “    | “   | “      |
|               | $\frac{4887}{3}$ | “                  | “ . . . . .                       | “           | “        | “    | “   | “      |
|               |                  |                    | “ . . . . .                       | “           | “        | “    | “   | “      |
|               | $\frac{4888}{1}$ | Type.              | <b>Cyrtionella</b> Hall . . . . . | N. Y. S. M. | 15       | 61   |     |        |
|               |                  |                    | mitella . . . . . Hall.           | I. D. F.    | Gast.    | .... | 25  | 16, 17 |
|               | $\frac{4888}{1}$ | “                  | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 123  | 25  | 23, 25 |
|               |                  |                    | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 25  | 18     |
| Ham.          | $\frac{4888}{1}$ | “                  | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 123  | 25  | 24     |
|               |                  |                    | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 25  | 22-24  |
|               | $\frac{4888}{1}$ | “                  | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 123  | 25  | 26-28  |
|               |                  |                    | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 25  | 26-28  |
|               | $\frac{4888}{1}$ | “                  | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 123  | 25  | 26-28  |
|               |                  |                    | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 25  | 26-28  |
|               | $\frac{4888}{1}$ | “                  | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 123  | 25  | 26-28  |
|               |                  |                    | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 25  | 26-28  |
|               | $\frac{4888}{1}$ | “                  | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 123  | 25  | 26-28  |
|               |                  |                    | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 25  | 26-28  |
| Ham.          | $\frac{4889}{1}$ | “                  | <b>Ecculiomphalus</b> Portlock.   |             |          |      |     |        |
|               |                  |                    | comes . . . . .                   | “           | “        | “    | “   | “      |
|               | $\frac{4889}{1}$ | “                  | <b>Euomphalus</b> Sowerby.        |             |          |      |     |        |
|               |                  |                    | Conradi . . . . .                 | “           | “        | “    | “   | “      |
|               | $\frac{4889}{1}$ | “                  | cyclostoma . . . . . Hall.        | Geol. Ia.   | 1, pt. 2 | 516  | 6   | 6a-c   |
|               |                  |                    | “ . . . . . “                     | “           | “        | “    | “   | “      |
|               | $\frac{4889}{1}$ | “                  | “ . . . . . “                     | “           | “        | “    | “   | “      |
|               |                  |                    | “ . . . . . “                     | “           | “        | “    | “   | “      |
|               | $\frac{4889}{1}$ | “                  | “ . . . . . “                     | “           | “        | “    | “   | “      |
|               |                  |                    | “ . . . . . “                     | “           | “        | “    | “   | “      |
| U. H.         | $\frac{4027}{1}$ | Fig'd.             | Decewi (Billings) . . . Hall.     | N. Y. S. M. | 14       | 107  |     |        |
|               |                  |                    | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 15  | 2-4, 8 |
|               | $\frac{4027}{1}$ | “                  | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 55   | 15  | 2-4, 8 |
|               |                  |                    | “ . . . . . “                     | “           | “        | “    | “   | “      |
|               | $\frac{4027}{3}$ | “                  | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 15  | 5, 6   |
|               |                  |                    | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 55   | 15  | 5, 6   |
|               | $\frac{4027}{3}$ | “                  | eboracensis . . . . .             | “           | “        | “    | “   | “      |
|               |                  |                    | hecale . . . . .                  | “           | “        | “    | “   | “      |
|               | $\frac{4027}{3}$ | “                  | laxus . . . . .                   | “           | “        | “    | “   | “      |
|               |                  |                    | “ . . . . . “                     | “           | “        | “    | “   | “      |
| Mar.          | $\frac{4406}{1}$ | Type.              | <b>(Phanerotinus)</b>             |             |          |      |     |        |
|               |                  |                    | planodiscus . . . . . Hall.       | N. Y. S. M. | 13       | 109  |     |        |
|               | $\frac{4406}{1}$ | “                  | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 16  | 1-4    |
|               |                  |                    | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 57   | 16  | 1-4    |
|               | $\frac{4406}{1}$ | “                  | rotundus . . . . .                | “           | “        | “    | “   | “      |
|               |                  |                    | rudis . . . . .                   | “           | “        | “    | “   | “      |
|               | $\frac{4406}{1}$ | “                  | “ . . . . . “                     | “           | “        | “    | “   | “      |
|               |                  |                    | “ . . . . . “                     | “           | “        | “    | “   | “      |
|               | $\frac{4406}{1}$ | “                  | “ . . . . . “                     | “           | “        | “    | “   | “      |
|               |                  |                    | “ . . . . . “                     | “           | “        | “    | “   | “      |
| Ham.          | $\frac{4890}{1}$ | Type.              | <b>(Phanerotinus)</b>             |             |          |      |     |        |
|               |                  |                    | eboracensis . . . . . Hall.       | N. Y. S. M. | 15       | 55   |     |        |
|               | $\frac{4890}{1}$ | “                  | “ . . . . . “                     | I. D. F.    | Gast.    | .... | 16  | 19, 20 |
|               |                  |                    | “ . . . . . “                     | Pal. N. Y.  | 5, pt. 2 | 61   | 16  | 19, 20 |
|               | $\frac{4890}{1}$ | “                  | “ . . . . . “                     | “           | “        | “    | “   | “      |
|               |                  |                    | “ . . . . . “                     | “           | “        | “    | “   | “      |
|               | $\frac{4890}{1}$ | “                  | “ . . . . . “                     | “           | “        | “    | “   | “      |
|               |                  |                    | “ . . . . . “                     | “           | “        | “    | “   | “      |
|               | $\frac{4890}{1}$ | “                  | “ . . . . . “                     | “           | “        | “    | “   | “      |
|               |                  |                    | “ . . . . . “                     | “           | “        | “    | “   | “      |



| LOCALITY.                     | REMARKS.                                                                                      |
|-------------------------------|-----------------------------------------------------------------------------------------------|
| Pratt's Falls, N. Y.          | Individual retaining much of shell. Onondaga county.                                          |
| Summit, N. Y.                 | A somewhat compressed cast. Schoharie county.                                                 |
| Hamilton, N. Y.               | Cast.                                                                                         |
| " "                           | Two casts.                                                                                    |
| Knox, N. Y.                   | Internal cast, imbedded.                                                                      |
| .....                         | See <i>Cyrtonella mitella</i> , <i>Cyrtonella pileolus</i> and <i>Bellerophon acutilira</i> . |
| .....                         | " " <i>pileolus</i> .                                                                         |
| .....                         | Defined as a subgenus of <i>Cyrtolites</i> .                                                  |
| .....                         | As <i>Cyrtolites</i> ? <i>mitella</i> .                                                       |
| .....                         | " " " Generic reference not queried.                                                          |
| Cazenovia, N. Y.              | Cast retaining some shell.                                                                    |
| .....                         | As <i>Cyrtolites mitella</i> .                                                                |
| Hamilton, N. Y.               | Cast retaining some shell.                                                                    |
| .....                         | As types of <i>Cyrtolites pileolus</i> .                                                      |
| Pratt's Falls, N. Y.          | Two internal casts, one retaining some shell. Onondaga county.                                |
| .....                         | As <i>Cyrtolites pileolus</i> .                                                               |
| .....                         | " " <i>mitella</i> .                                                                          |
| Hamilton, N. Y.               | Entire internal cast.                                                                         |
| " "                           | Cast showing external features.                                                               |
| .....                         | See <i>Euomphalus laxus</i> .                                                                 |
| .....                         | " " <i>Decewi</i> .                                                                           |
| Mouth of Pine Creek,<br>Iowa. | Well preserved individual, nearly entire.                                                     |
| .....                         | As types of <i>Euomphalus Conradi</i> Hall.                                                   |
| Stafford, N. Y.               | Two internal casts. The smaller one is in chert and retains some shell.                       |
| Batavia, N. Y.                | Large internal cast.                                                                          |
| .....                         | See <i>Euomphalus</i> ( <i>Phanerotinus</i> ) <i>eboracensis</i> .                            |
| .....                         | " " ( <i>Straparollus</i> ) <i>hecale</i> .                                                   |
| .....                         | " " ( <i>Phanerotinus</i> ) <i>laxus</i> .                                                    |
| Manlius, N. Y.                | Three imbedded individuals retaining more or less shell.                                      |
| .....                         | See <i>Pleurotomaria lucina</i> .                                                             |
| .....                         | " <i>Euomphalus</i> ( <i>Straparollus</i> ) <i>rudis</i> .                                    |
| .....                         | As <i>Euomphalus eboracensis</i> .                                                            |
| .....                         | " " "                                                                                         |
| York, N. Y.                   | Imbedded.                                                                                     |

## Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                 | REFERENCE.  |          |      |      |           |
|---------------|------------------|-------------------|------------------------------------------------------------|-------------|----------|------|------|-----------|
|               |                  |                   |                                                            | Work.       | Vol.     | P.   | Pl.  | Figs.     |
|               |                  |                   | <b>Euomphalus</b> Sowerby—Cont.<br>( <b>Phanerotinus</b> ) |             |          |      |      |           |
| Ham.          | $\frac{4891}{1}$ | Type.             | laxus.....Hall.                                            | N. Y. S. M. | 15       | 54   | 6    | 1         |
|               |                  |                   | "                                                          | I. D. F.    | Gast.    | .... | 16   | 9         |
| "             | $\frac{4891}{2}$ | "                 | "                                                          | Pal. N. Y.  | 5, pt. 2 | 60   | 16   | 9         |
|               |                  |                   | "                                                          | N. Y. S. M. | 15       | 54   | .... | ....      |
|               |                  |                   | "                                                          | I. D. F.    | Gast.    | .... | 16   | 18        |
|               |                  |                   | "                                                          | Pal. N. Y.  | 5, pt. 2 | 60   | 16   | 18        |
|               |                  |                   | ( <b>Straparollus</b> )                                    |             |          |      |      |           |
| Chem.         | $\frac{4892}{1}$ | "                 | hecale.....Hall.                                           | I. D. F.    | Gast.    | .... | 16   | 11        |
|               |                  |                   | "                                                          | Pal. N. Y.  | 5, pt. 2 | 59   | 16   | 11        |
|               |                  |                   | ( <b>Straparollus</b> )                                    |             |          |      |      |           |
| Ham.          | $\frac{4893}{1}$ | "                 | rudis.....Hall.                                            | I. D. F.    | Gast.    | .... | 16   | 6         |
|               |                  |                   | "                                                          | Pal. N. Y.  | 5, pt. 2 | 58   | 16   | 6         |
|               |                  |                   | <b>Isonema</b> M. & W.                                     |             |          |      |      |           |
|               |                  |                   | <i>bellatula</i> .....                                     |             |          |      |      |           |
| U. H.         | $\frac{4226}{1}$ | Fig'd.            | humile ( <i>Meek</i> ) H. & W.                             | N. Y. S. M. | 23       | 240  | 12   | 3-5       |
|               |                  |                   | <i>lichas</i> .....                                        |             |          |      |      |           |
|               |                  |                   | <b>Loxonema</b> Phillips.                                  |             |          |      |      |           |
|               |                  |                   | <i>bellatula</i> .....                                     |             |          |      |      |           |
| Ham.          | $\frac{4894}{1}$ | Type.             | bellona.....Hall.                                          | I. D. F.    | Gast.    | .... | 14   | 3         |
|               |                  |                   | "                                                          | Pal. N. Y.  | 5, pt. 2 | 46   | 14   | 3         |
| "             | $\frac{4895}{1}$ | "                 | ? coaptum.....Hall.                                        | I. D. F.    | Gast.    | .... | 13   | 7         |
|               |                  |                   | "                                                          | Pal. N. Y.  | 5, pt. 2 | 44   | 13   | 7         |
| "             | $\frac{4896}{1}$ | "                 | delphicola.....Hall.                                       | N. Y. S. M. | 15       | 52   | 4    | 9         |
|               |                  |                   | "                                                          | I. D. F.    | Gast.    | .... | 13   | 22, 23    |
|               |                  |                   | "                                                          | Pal. N. Y.  | 5, pt. 2 | 47   | 13   | 22, 23    |
| "             | $\frac{4896}{2}$ | "                 | "                                                          | I. D. F.    | Gast.    | .... | 13   | 19        |
| "             | $\frac{4896}{3}$ | "                 | "                                                          | Pal. N. Y.  | 5, pt. 2 | 47   | 13   | 19        |
| "             |                  |                   | "                                                          | I. D. F.    | Gast.    | .... | 13   | 24        |
| "             |                  |                   | "                                                          | Pal. N. Y.  | 5, pt. 2 | 47   | 13   | 24        |
| "             | $\frac{4897}{1}$ | "                 | hamiltoniæ.....Hall.                                       | N. Y. S. M. | 15       | 53   |      |           |
|               |                  |                   | "                                                          | I. D. F.    | Gast.    | .... | 13   | 15, 17    |
|               |                  |                   | "                                                          | Pal. N. Y.  | 5, pt. 2 | 45   | 13   | 15, 17    |
| U. H.         | $\frac{4039}{1}$ | "                 | pexatum.....Hall.                                          | N. Y. S. M. | 14       | 104  |      |           |
|               |                  |                   | "                                                          | I. D. F.    | Gast.    | .... | 13   | 11, 12    |
|               |                  |                   | "                                                          | Pal. N. Y.  | 5, pt. 2 | 42   | 13   | 11, 12    |
| "             | $\frac{4039}{2}$ | "                 | "                                                          | I. D. F.    | Gast.    | .... | 13   | 16, 18    |
| "             |                  |                   | "                                                          | Pal. N. Y.  | 5, pt. 2 | 42   | 13   | 16, 18    |
| "             |                  | "                 | " var. obsoletum                                           | I. D. F.    | Gast.    | .... | 13   | 13        |
|               |                  |                   | "                                                          | Pal. N. Y.  | 5, pt. 2 | 43   | 13   | 13        |
| "             | $\frac{4036}{1}$ | "                 | robustum.....Hall.                                         | N. Y. S. M. | 15       | 52   |      |           |
|               |                  |                   | "                                                          | I. D. F.    | Gast.    | .... | 13   | 6         |
|               |                  |                   | "                                                          | Pal. N. Y.  | 5, pt. 2 | 40   | 13   | 6         |
| "             | $\frac{4040}{1}$ | "                 | ? teres.....Hall.                                          | I. D. F.    | Gast.    | .... | 13   | 10        |
|               |                  |                   | "                                                          | Pal. N. Y.  | 5, pt. 2 | 42   | 13   | 10        |
|               |                  |                   | <b>Macrocheilus</b> Phillips.                              |             |          |      |      |           |
| Ham.          | $\frac{4898}{1}$ | "                 | hamiltoniæ.....Hall.                                       | N. Y. S. M. | 15       | 49   | 4    | 2         |
|               |                  |                   | "                                                          | I. D. F.    | Gast.    | .... | 12   | 8,9,12-14 |
|               |                  |                   | "                                                          | Pal. N. Y.  | 5, pt. 2 | 33   | 12   | 8,9,12-14 |
| "             | $\frac{4898}{2}$ | "                 | "                                                          | I. D. F.    | Gast.    | .... | 12   | 10, 11    |
|               |                  |                   | "                                                          | Pal. N. Y.  | 5, pt. 2 | 33   | 12   | 10, 11    |
| Mar.          | $\frac{4425}{1}$ | "                 | hebe.....Hall.                                             | N. Y. S. M. | 15       | 48   | 4    | 1         |
|               |                  |                   | "                                                          | I. D. F.    | Gast.    | .... | 12   | 6, 7      |
|               |                  |                   | "                                                          | Pal. N. Y.  | 5, pt. 2 | 32   | 12   | 6, 7      |



| LOCALITY.              | REMARKS.                                                                                                                                            |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                  | As <i>Euomphalus</i> ( <i>Straparollus</i> ) <i>laxus</i> in explanation of plate.                                                                  |
| .....                  | As a type of <i>Ecculiomphalus comes</i> Hall.                                                                                                      |
| Otsego Co., N. Y.      | Cast, imbedded. Shows external features.                                                                                                            |
| .....                  | As <i>Euomphalus laxus</i> .                                                                                                                        |
| .....                  | “ “ ( <i>Ecculiomphalus</i> ?) <i>laxus</i> .                                                                                                       |
| Alden, N. Y.           | Imbedded. From a loose block.                                                                                                                       |
| .....                  | As <i>Euomphalus hecale</i> .                                                                                                                       |
| Rockville, N. Y.       | Imbedded. Somewhat crushed.                                                                                                                         |
| .....                  | As <i>Euomphalus rudis</i> .                                                                                                                        |
| York, N. Y.            | Imbedded.                                                                                                                                           |
| .....                  | See <i>Callonema bellatulum</i> .                                                                                                                   |
| Near Dublin, Ohio.     | As the type of <i>Naticopsis cretacea</i> H. & W., in the text, and called <i>Naticopsis lævis</i> Meek, by error, in the explanation of the plate. |
| .....                  | Two somewhat exfoliated individuals.                                                                                                                |
| .....                  | See <i>Callonema lichas</i> .                                                                                                                       |
| .....                  | “ “ <i>bellatulum</i> .                                                                                                                             |
| Bellona, N. Y.         | Cast retaining a small fragment of shell.                                                                                                           |
| .....                  | Generic reference not queried in this reference.                                                                                                    |
| 18 Mile Creek, N. Y.   | Internal cast, imbedded. From the shore of Lake Erie.                                                                                               |
| Delphi, N. Y.          | Individual preserving shell.                                                                                                                        |
| Seneca Lake, N. Y.     | Imbedded.                                                                                                                                           |
| Near Penn Yan, N. Y.   | Imbedded and partly enclosed in a coating of slickensided shale.                                                                                    |
| Near Delphi, N. Y.     | Two individuals. From Pratt's Falls.                                                                                                                |
| .....                  | Specific name queried here.                                                                                                                         |
| Stafford, N. Y.        | The internal cast from which both figures were made. Another cast is marked as a type, but it was not figured.                                      |
| Near Dublin, Ohio.     | Two silicified specimens. Figure 16 is of the original type.                                                                                        |
| .....                  | Specific reference queried here.                                                                                                                    |
| Near Dublin, Ohio.     | Part of a silicified individual.                                                                                                                    |
| Clarence Hollow, N. Y. | Internal cast, not entire.                                                                                                                          |
| “ “ “                  | A nearly entire internal cast.                                                                                                                      |
| Cazenovia, N. Y.       | Two crushed individuals.                                                                                                                            |
| Near Cumberland, Md.   | Internal cast.                                                                                                                                      |
| .....                  | Aperture restored in the enlarged outline.                                                                                                          |
| Manlius, N. Y.         | The original type specimen. From the Goniatite limestone.                                                                                           |

## Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                           | REFERENCE.             |                   |            |          |              |
|---------------|------------------|--------------------|------------------------------------------------------|------------------------|-------------------|------------|----------|--------------|
|               |                  |                    |                                                      | Work.                  | Vol.              | P.         | Pl.      | Figs.        |
| Ham.          | $\frac{4425}{2}$ | Type.              | <b>Macrocheilus</b> Phillips—Cont.<br>hebe.....Hall. | I. D. F.<br>Pal. N. Y. | Gast.<br>5, pt. 2 | ....<br>33 | 12<br>12 | 4, 5<br>4, 5 |
|               |                  |                    |                                                      |                        |                   |            |          |              |
|               |                  |                    | (Holoepa)                                            |                        |                   |            |          |              |
| "             | $\frac{4899}{1}$ | "                  | macrostoma.....Hall.                                 | N. Y. S. M.            | 15                | 49         | 4        | 3            |
|               |                  |                    | "                                                    | I. D. F.               | Gast.             | ....       | 12       | 15-17        |
|               |                  |                    | "                                                    | Pal. N. Y.             | 5, pt. 2          | 33         | 12       | 15-17        |
| "             | $\frac{4899}{2}$ | "                  | " .....                                              | I. D. F.               | Gast.             | ....       | 12       | 18           |
|               |                  |                    | "                                                    | Pal. N. Y.             | 5, pt. 2          | 33         | 12       | 18           |
|               |                  |                    |                                                      |                        |                   |            |          |              |
|               |                  |                    | <b>Murchisonia</b> d'A. & de V.                      |                        |                   |            |          |              |
| U. H.         | $\frac{4236}{1}$ | "                  | desiderata.....Hall.                                 | N. Y. S. M.            | 15                | 50         | 4        | 12           |
|               |                  |                    | "                                                    | Pal. N. Y.             | 5, pt. 2          | 89         | 21       | 1-3          |
| "             | $\frac{4234}{1}$ | "                  | leda.....Hall.                                       | N. Y. S. M.            | 14                | 103        |          |              |
|               |                  |                    | "                                                    | " "                    | 15                | ....       | 4        | 10           |
|               |                  |                    | "                                                    | Pal. N. Y.             | 5, pt. 2          | 91         | 21       | 4            |
| "             | $\frac{4235}{1}$ | "                  | maia.....Hall.                                       | N. Y. S. M.            | 14                | 103        |          |              |
|               |                  |                    | "                                                    | " "                    | 15                | ....       | 4        | 11           |
|               |                  |                    | "                                                    | Pal. N. Y.             | 5, pt. 2          | 91         | 21       | 5-9          |
| Ham.          | $\frac{4900}{1}$ | "                  | micula (Hall)....Miller.                             | Am. P. F.              | ....              | 244        | ....     | ....         |
|               |                  |                    |                                                      |                        |                   |            |          |              |
|               |                  |                    | Hall.                                                | N. Y. S. M.            | 15                | 50         | 4        | 13           |
|               |                  |                    | "                                                    | Pal. N. Y.             | 5, pt. 2          | 93         | 21       | 11           |
|               |                  |                    |                                                      |                        |                   |            |          |              |
|               |                  |                    | turricula Hall (non Bill.)                           | ....                   | ....              | ....       | ....     | ....         |
|               |                  |                    |                                                      |                        |                   |            |          |              |
|               |                  |                    | <b>Naticopsis</b> McCoy.                             |                        |                   |            |          |              |
|               |                  |                    | cretacea.....                                        | ....                   | ....              | ....       | ....     | ....         |
| Chem.         | $\frac{4901}{1}$ | Type.              | gigantea.....H. & W.                                 | N. Y. S. M.            | 23                | 238        | 12       | 9            |
|               |                  |                    | laevis.....                                          | " "                    | 23                | ....       | 12       | 3-5          |
|               |                  |                    |                                                      |                        |                   |            |          |              |
|               |                  |                    | <b>Orthonychia</b> Hall.....                         | ....                   | ....              | ....       | ....     | ....         |
|               |                  |                    | sp.....                                              | Geol. N. Y.            | 4th D.            | 173        | ct. 68   | 3            |
|               |                  |                    |                                                      |                        |                   |            |          |              |
|               |                  |                    | <b>Palæotrochus</b> Hall.....                        | ....                   | ....              | ....       | ....     | ....         |
| U. H.         | $\frac{4228}{2}$ | Gen. and Sp. Type. | Kearneyi.....Hall.                                   | N. Y. S. M.            | 14                | 105        | ....     | ....         |
|               |                  |                    | "                                                    | " "                    | 15                | ....       | 4        | 14           |
|               |                  |                    | "                                                    | Pal. N. Y.             | 5, pt. 2          | 133        | 30       | 14           |
|               |                  |                    |                                                      |                        |                   |            |          |              |
|               |                  |                    | <b>Phragmostoma</b> Hall.                            |                        |                   |            |          |              |
|               |                  |                    | natator.....                                         | ....                   | ....              | ....       | ....     | ....         |
|               |                  |                    |                                                      |                        |                   |            |          |              |
|               |                  |                    | <b>Platyceras</b> Conrad.                            |                        |                   |            |          |              |
| U. H.         | $\frac{4018}{1}$ | Type.              | ammon.....Hall.                                      | N. Y. S. M.            | 15                | 37         |          |              |
|               |                  |                    | "                                                    | I. D. F.               | Gast.             | ....       | 8        | 7            |
|               |                  |                    | "                                                    | Pal. N. Y.             | 5, pt. 2          | 20         | 8        | 7            |
| "             | $\frac{4018}{2}$ | "                  | " .....                                              | I. D. F.               | Gast.             | ...        | 8        | 8-10         |
|               |                  |                    | "                                                    | Pal. N. Y.             | 5, pt. 2          | 20         | 8        | 8-10         |
| "             | $\frac{4021}{1}$ | "                  | argo.....Hall.                                       | N. Y. S. M.            | 15                | 39         |          |              |
|               |                  |                    | "                                                    | I. D. F.               | Gast.             | ....       | 8        | 4-6          |
|               |                  |                    | "                                                    | Pal. N. Y.             | 5, pt. 2          | 19         | 8        | 4-6          |
| Ham.          | $\frac{4902}{1}$ | "                  | attenuatum.....Hall.                                 | N. Y. S. M.            | 15                | 30         |          |              |
|               |                  |                    | "                                                    | I. D. F.               | Gast.             | ....       | 3        | 2, 3         |
|               |                  |                    | "                                                    | Pal. N. Y.             | 5, pt. 2          | 6          | 3        | 2, 3         |
| "             | $\frac{4903}{1}$ | "                  | bucculentum.....Hall.                                | N. Y. S. M.            | 15                | 33         |          |              |
|               |                  |                    | "                                                    | I. D. F.               | Gast.             | ....       | 3        | 7            |
|               |                  |                    | "                                                    | Pal. N. Y.             | 5, pt. 2          | 10         | 3        | 7            |
| "             | $\frac{4903}{2}$ | "                  | " .....                                              | I. D. F.               | Gast.             | ....       | 3        | 26, 28       |
|               |                  |                    | "                                                    | Pal. N. Y.             | 5, pt. 2          | 10         | 3        | 26, 28       |



| LOCALITY.             | REMARKS.                                                                              |
|-----------------------|---------------------------------------------------------------------------------------|
| Hamilton, N. Y.       | Very large individual.                                                                |
| Pratt's Falls, N. Y.  | Two individuals, one denuded of shell. From the Goniatite limestone (?).              |
| .....                 | " Referred with doubt to this species."                                               |
| Madison Co., N. Y.    | Cast, flattened laterally.                                                            |
| Falls of Ohio River.  | A siliceous replacement of the shell.                                                 |
| Cambridge, Ohio.      | Part of an internal cast retaining some shell, silicified.                            |
| Near Dublin, Ohio.    | Two silicified fragments.                                                             |
| .....                 | Name proposed instead of <i>Murchisonia turricula</i> , which was preoccupied.        |
| .....                 | As type of <i>Murchisonia turricula</i> .                                             |
| Pratt's Falls, N. Y.  | Imbedded individual retaining some shell. Pratt's Falls=Delphi Falls. Onondaga county |
| .....                 | See <i>Murchisonia micula</i> .                                                       |
| .....                 | " <i>Isonema humile</i> and <i>Pleurotomaria</i> ? sp.                                |
| Near Rockford, Iowa.  | Cast of large individual retaining some shell. Aperture is imperfect.                 |
| .....                 | See <i>Isonema humile</i> .                                                           |
| .....                 | Synonym of <i>Platyceras</i> .                                                        |
| .....                 | See <i>Platyceras subrectum</i> .                                                     |
| .....                 | Defined as a subgenus of <i>Trochus</i> .                                             |
| .....                 | As <i>Pleurotomaria Kearneyi</i> .                                                    |
| .....                 | " " "                                                                                 |
| Sandusky, Ohio.       | Incomplete cast of the exterior.                                                      |
| .....                 | See <i>Bellerophon natator</i> .                                                      |
| Port Colborne, Ont.   | A weathered internal cast retaining some shell.                                       |
| Darien, N. Y.         | A large individual partly denuded of shell.                                           |
| Williamsville, N. Y.  | A considerably exfoliated individual, imbedded.                                       |
| Canandaigua L., N. Y. | As <i>Platyceras (Orthonychia) attenuatum</i> . Imbedded.                             |
| .....                 | Specific reference queried here.                                                      |
| Canandaigua L., N. Y. | Imbedded, apparently entire.                                                          |
| .....                 | Figure marked 25 on plate, by error.                                                  |
| Moscow, N. Y.         | Nearly entire.                                                                        |

## Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.          | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                      | REFERENCE.  |          |      |      |           |
|---------------|-------------------|--------------------|-----------------------------------------------------------------|-------------|----------|------|------|-----------|
|               |                   |                    |                                                                 | Work.       | Vol.     | P.   | Pl.  | Figs.     |
| Ham.          | $\frac{4903}{3}$  | Type.              | <b>Platyceras</b> Conrad— <i>Cont.</i><br>bucculentum.....Hall. | I. D. F.    | Gast.    | .... | 3    | 27        |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 10   | 3    | 27        |
|               |                   |                    | <i>callosum</i> .....                                           |             |          |      |      |           |
| U. H.         | $\frac{4012}{1}$  | Type.              | carinatum.....Hall.                                             | N. Y. S. M. | 15       | 33   |      |           |
|               |                   |                    | “                                                               | I. D. F.    | Gast.    | .... | 2    | 12, 13    |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 5    | 2    | 12, 13    |
| “             | $\frac{4012}{2}$  | “                  | “ .....                                                         | I. D. F.    | Gast.    | .... | 2    | 14-16     |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 5    | 2    | 14-16     |
| “             | $\frac{4012}{3}$  | “                  | “ .....                                                         | I. D. F.    | Gast.    | .... | 2    | 17-19     |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 5    | 2    | 17-19     |
| “             | $\frac{4012}{1}$  | “                  | “ .....                                                         | I. D. F.    | Gast.    | .... | 2    | 28, 29    |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 5    | 2    | 28, 29    |
| “             | $\frac{2859}{3}$  | “                  | concavum.....Hall.                                              | N. Y. S. M. | 15       | 30   | .... | ....      |
|               |                   |                    | “                                                               | I. D. F.    | Gast.    | .... | 1    | 9, 10     |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 3    | 1    | 9, 10     |
| “             | $\frac{2859}{2}$  | “                  | “ .....                                                         | I. D. F.    | Gast.    | .... | 1    | 11, 12    |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 3    | 1    | 11, 12    |
| “             | $\frac{2860}{2}$  | “                  | conicum.....Hall.                                               | N. Y. S. M. | 15       | 31   |      |           |
|               |                   |                    | “                                                               | I. D. F.    | Gast.    | .... | 1    | 13-17, 19 |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 3    | 1    | 13-17, 19 |
| Ham.          | $\frac{2860}{3}$  | “                  | “ .....                                                         | I. D. F.    | Gast.    | .... | 1    | 18        |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 3    | 1    | 18        |
| U. H.         | $\frac{2860}{2}$  | “                  | “ .....                                                         | I. D. F.    | Gast.    | .... | 2    | 30, 31    |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 3    | 2    | 30, 31    |
| “             | $\frac{4018}{3}$  | “                  | crassum.....Hall.                                               | N. Y. S. M. | 15       | 36   |      |           |
|               |                   |                    | “                                                               | I. D. F.    | Gast.    | .... | 7    | 8-10      |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 18   | 7    | 8-10      |
| “             | $\frac{4015}{2}$  | “                  | cymbium.....Hall.                                               | N. Y. S. M. | 15       | 35   |      |           |
|               |                   |                    | “                                                               | I. D. F.    | Gast.    | ...  | 4    | 9-11      |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 12   | 4    | 9-11      |
| “             | $\frac{2858}{2}$  | “                  | dentalium.....Hall.                                             | N. Y. S. M. | 15       | 29   | .... | ....      |
|               |                   |                    | “                                                               | I. D. F.    | Gast.    | .... | 1    | 4-6       |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 2    | 1    | 4-6       |
| “             | $\frac{4019}{1}$  | Gen. and Sp. Type. | dumosum.....Conrad.                                             | Geol. N. Y. | 1840     | 205  |      |           |
|               |                   |                    | Hall.                                                           | N. Y. S. M. | 15       | 37   |      |           |
|               |                   |                    | “                                                               | I. D. F.    | Gast.    | .... | 5    | 14, 15    |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 14   | 5    | 14, 15    |
| “             | $\frac{4019}{7}$  | Fig'd.             | “ (Con.)....Hall.                                               | N. Y. S. M. | 12       | 19   | .... | ....      |
|               |                   |                    | “                                                               | I. D. F.    | Gast.    | .... | 5    | 12        |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 14   | 5    | 12        |
| “             | $\frac{4019}{2}$  | “                  | “ .....                                                         | I. D. F.    | Gast.    | .... | 5    | 11        |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 14   | 5    | 11        |
| “             | $\frac{4019}{8}$  | “                  | “ .....                                                         | I. D. F.    | Gast.    | .... | 5    | 13        |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 14   | 5    | 13        |
| “             | $\frac{4019}{7}$  | “                  | “ .....                                                         | I. D. F.    | Gast.    | .... | 5    | 16        |
|               |                   |                    | “                                                               |             |          |      | 7    | 3         |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 14   | 5    | 16        |
|               |                   |                    | “                                                               |             |          |      | 7    | 3         |
| “             | $\frac{4019a}{3}$ | Type.              | “ var. rarispinum Hall.                                         | N. Y. S. M. | 15       | 38   | .... | ....      |
|               |                   |                    | “                                                               | I. D. F.    | Gast.    | .... | 5    | 5         |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 16   | 5    | 5         |
| “             | $\frac{4019a}{4}$ | “                  | “ “ “                                                           | I. D. F.    | Gast.    | .... | 5    | 6, 7      |
|               |                   |                    | “                                                               | Pal. N. Y.  | 5, pt. 2 | 16   | 5    | 6, 7      |



| LOCALITY.                                | REMARKS.                                                                                                                      |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| York, N. Y.<br>.....                     | A weathered individual.<br>See <i>Platyceras?</i> ( <i>Platystoma?</i> ) <i>callosum</i> .                                    |
| The Helderbergs, N. Y.                   | Individual retaining most of shell.                                                                                           |
| Nr. Williamsville, N. Y.                 | A very perfect, small individual.                                                                                             |
| Sandusky, O.                             | Internal cast.                                                                                                                |
| The Helderbergs, N. Y.<br>.....<br>..... | Large internal cast with apex missing.<br>As <i>Platyceras</i> ( <i>Orthonychia</i> ) <i>concauum</i> .<br>" " " " "          |
| Williamsville, N. Y.<br>.....            | " " " " " Internal cast with apex<br>missing.<br>As <i>Platyceras</i> ( <i>Orthonychia</i> ) <i>concauum</i> .<br>" " " " "   |
| Onondaga Indian<br>Reservation, N. Y.    | " " " " " Rather small individual with<br>apex missing.                                                                       |
| Onondaga, N. Y.                          | As <i>Platyceras</i> ( <i>Orthonychia</i> ) <i>conicum</i> . Four individuals, one of<br>which has lost its apex.             |
| Canandaigua L., N. Y.                    | As <i>Platyceras</i> ( <i>Orthonychia</i> ) <i>conicum</i> . Internal cast retaining part<br>of shell.                        |
| Onondaga, N. Y.                          | Entire.                                                                                                                       |
| The Helderbergs, N. Y.                   | Internal cast retaining part of shell.                                                                                        |
| Clarence Hollow, N. Y.<br>.....<br>..... | Internal cast, partly restored in the figures.<br>As <i>Platyceras</i> ( <i>Orthonychia</i> ) <i>dentalium</i> .<br>" " " " " |
| The Helderbergs, N. Y.                   | " " " " " A somewhat compressed<br>individual.                                                                                |
| Schoharie, N. Y.<br>.....                | A large individual, imbedded.<br>Figure was made from this specimen.                                                          |
| Schoharie?, N. Y.                        | Imbedded. Bears old label as coming from The Helderbergs.                                                                     |
| Falls of Ohio River.                     | A small individual.                                                                                                           |
| Columbus, Ohio.                          | Individual preserving many spines.                                                                                            |
| The Helderbergs, N. Y.                   | Internal cast.                                                                                                                |
| Oneida Co., N. Y.                        | A small individual.                                                                                                           |
| Darien, N. Y.                            | Individual partly denuded of shell.                                                                                           |

Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.           | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                            | REFERENCE.  |          |      |       |           |
|---------------|--------------------|-------------------|---------------------------------------------------------------------------------------|-------------|----------|------|-------|-----------|
|               |                    |                   |                                                                                       | Work.       | Vol.     | P.   | Pl.   | Figs.     |
| U. H.         | 4019a <sub>5</sub> | Type.             | <b>Platyceras</b> Conrad— <i>Cont.</i><br>dumosum <i>var.</i> rarispinum <i>Hall.</i> | I. D. F.    | Gast.    | .... | 5     | 10        |
|               |                    |                   | "                                                                                     | Pal. N. Y.  | 5, pt. 2 | 16   | 5     | 10        |
| Ham.          | 4904 <sub>1</sub>  | "                 | echinatum ..... <i>Hall.</i>                                                          | N. Y. S. M. | 15       | 38   |       |           |
|               |                    |                   | "                                                                                     | I. D. F.    | Gast.    | .... | 5     | 1, 2      |
|               |                    |                   | "                                                                                     | Pal. N. Y.  | 5, pt. 2 | 13   | 5     | 1, 2      |
| U. H.         | 4016 <sub>1</sub>  | "                 | erectum ..... <i>Hall.</i>                                                            | Geol. N. Y. | 4th D.   | 174  | ct 68 | 6         |
|               |                    |                   | "                                                                                     | N. Y. S. M. | 15       | 32   |       |           |
|               |                    |                   | "                                                                                     | I. D. F.    | Gast.    | .... | 2     | 4         |
|               |                    |                   | "                                                                                     | Pal. N. Y.  | 5, pt. 2 | 5    | 2     | 4         |
| Ham.          | 4016 <sub>2</sub>  | "                 | " ..... "                                                                             | I. D. F.    | Gast.    | .... | 2     | 7, 8      |
|               |                    |                   | " ..... "                                                                             | Pal. N. Y.  | 5, pt. 2 | 5    | 2     | 7, 8      |
| "             | 4016 <sub>3</sub>  | "                 | " ..... "                                                                             | I. D. F.    | Gast.    | .... | 2     | 11        |
|               |                    |                   | " ..... "                                                                             | Pal. N. Y.  | 5, pt. 2 | 5    | 2     | 11        |
| U. H.         | 4013 <sub>3</sub>  | "                 | fornicatum ..... <i>Hall.</i>                                                         | N. Y. S. M. | 15       | 35   |       |           |
|               |                    |                   | "                                                                                     | I. D. F.    | Gast.    | .... | 4     | 1-3       |
|               |                    |                   | "                                                                                     | Pal. N. Y.  | 5, pt. 2 | 11   | 4     | 1-3       |
| "             | 4013 <sub>2</sub>  | "                 | " ..... "                                                                             | I. D. F.    | Gast.    | .... | 4     | 4, 5      |
|               |                    |                   | " ..... "                                                                             | Pal. N. Y.  | 5, pt. 2 | 11   | 4     | 4, 5      |
| "             | 4013 <sub>1</sub>  | "                 | " ..... "                                                                             | I. D. F.    | Gast.    | .... | 4     | 7, 8      |
|               |                    |                   | " ..... "                                                                             | Pal. N. Y.  | 5, pt. 2 | 11   | 4     | 7, 8      |
| "             | "                  | "                 | " ..... "                                                                             | I. D. F.    | Gast.    | .... | 4     | 18-20     |
|               |                    |                   | " ..... "                                                                             | Pal. N. Y.  | 5, pt. 2 | 11   | 4     | 18-20     |
| "             | 4013 <sub>4</sub>  | "                 | " <i>var.</i> contractum <i>Hall.</i>                                                 | I. D. F.    | Gast.    | .... | 5     | 8, 9      |
|               |                    |                   | "                                                                                     | Pal. N. Y.  | 5, pt. 2 | 12   | 5     | 8, 9      |
|               |                    |                   | "                                                                                     | N. Y. S. M. | 15       | 36   | ....  | ....      |
|               |                    |                   | var. ....                                                                             | "           | 15       | 36   | ....  | ....      |
| Orisk.        | 2565 <sub>4</sub>  | Type.             | Gebhardi ..... <i>Hall.</i>                                                           | Pal. N. Y.  | 3        | 474  | 117   | 1-3, 5-10 |
| "             | 2752 <sub>1</sub>  | "                 | magnificum ..... <i>Hall.</i>                                                         | "           | 3        | 476  | 119   | 1, 2, 4-6 |
| "             | 2691 <sub>1</sub>  | Fig'd.            | nodosum ( <i>Con.</i> ) ..... <i>Hall.</i>                                            | "           | 3        | 473  | 115   | 1, 3-6    |
| U. H.         | 2691 <sub>2</sub>  | "                 | " ..... "                                                                             | I. D. F.    | Gast.    | .... | 7     | 4, 5      |
|               |                    |                   | " ..... "                                                                             | Pal. N. Y.  | 5, pt. 2 | 17   | 7     | 4, 5      |
| Orisk.        | 2750 <sub>1</sub>  | Type.             | patulum ..... <i>Hall.</i>                                                            | "           | 3        | 477  | 119   | 3         |
| U. H.         | 4006 <sub>1</sub>  | "                 | perplexum ..... <i>Hall.</i>                                                          | I. D. F.    | Gast.    | .... | 2     | 1-3       |
|               |                    |                   | "                                                                                     | Pal. N. Y.  | 5, pt. 2 | 4    | 2     | 1-3       |
| Orisk.        | 2749 <sub>1</sub>  | "                 | reflexum ..... <i>Hall.</i>                                                           | "           | 3        | 477  | 120   | 1-7       |
| U. H.         | 4009 <sub>1</sub>  | "                 | rictum ..... <i>Hall.</i>                                                             | N. Y. S. M. | 15       | 35   |       |           |
|               |                    |                   | "                                                                                     | I. D. F.    | Gast.    | .... | 4     | 6, 15-17  |
|               |                    |                   | "                                                                                     | Pal. N. Y.  | 5, pt. 2 | 13   | 4     | 6, 15-17  |
| "             | 4005 <sub>1</sub>  | "                 | subrectum ..... <i>Hall.</i>                                                          | N. Y. S. M. | 12       | 18   | ....  | ....      |
|               |                    |                   | "                                                                                     | Geol. N. Y. | 4th D.   | 173  | ct.68 | 3         |
|               |                    |                   | "                                                                                     | N. Y. S. M. | 15       | 29   | ....  | ....      |
|               |                    |                   | "                                                                                     | I. D. F.    | Gast.    | .... | 1     | 2         |
|               |                    |                   | "                                                                                     | Pal. N. Y.  | 5, pt. 2 | 1    | 1     | 2         |
| "             | 4005 <sub>2</sub>  | "                 | " ..... "                                                                             | I. D. F.    | Gast.    | .... | 1     | 1         |
|               |                    |                   | " ..... "                                                                             | Pal. N. Y.  | 5, pt. 2 | 1    | 1     | 1         |
| Ham.          | 4905 <sub>1</sub>  | "                 | symmetricum ..... <i>Hall.</i>                                                        | N. Y. S. M. | 15       | 34   |       |           |
|               |                    |                   | "                                                                                     | I. D. F.    | Gast.    | .... | 3     | 17        |
|               |                    |                   | "                                                                                     | Pal. N. Y.  | 5, pt. 2 | 9    | 3     | 17        |
| "             | 4905 <sub>2</sub>  | "                 | " ..... "                                                                             | I. D. F.    | Gast.    | .... | 3     | 22-24     |
|               |                    |                   | " ..... "                                                                             | Pal. N. Y.  | 5, pt. 2 | 9    | 3     | 22-24     |
| Orisk.        | 2692 <sub>1</sub>  | "                 | tortuosum ..... <i>Hall.</i>                                                          | "           | 3        | 472  | 113   | 1, 3-5    |
| "             | 2568 <sub>5</sub>  | Fig'd.            | ventricosum ( <i>Con.</i> ) ..... <i>Hall.</i>                                        | "           | 3        | 475  | 118   | 3-9       |
| "             | 2693 <sub>1</sub>  | "                 | sp. .... <i>Hall.</i>                                                                 | "           | 3        | 473  | 113   | 6         |



| LOCALITY.                                                                         | REMARKS.                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Schoharie, N. Y.                                                                  | Imbedded, part of shell gone. See also <i>Platyceras nodosum</i> .                                                                                                                                                          |
| Ludlowville, N. Y.<br>.....                                                       | A small individual.<br>As <i>Acroculia erecta</i> .                                                                                                                                                                         |
| 5 miles East of Buffalo,<br>N. Y.                                                 | Entire.                                                                                                                                                                                                                     |
| Pavilion, N. Y.                                                                   | Entire.                                                                                                                                                                                                                     |
| York, N. Y.                                                                       | A small individual.                                                                                                                                                                                                         |
| Schoharie Co., N. Y.                                                              | A weathered individual.                                                                                                                                                                                                     |
| Williamsville, N. Y.                                                              | A weathered individual which has lost part of the shell.                                                                                                                                                                    |
| Onondaga, N. Y.<br>.....                                                          | A large individual, somewhat crushed.<br>As <i>Platyceras rictum</i> .                                                                                                                                                      |
| Onondaga, N. Y.                                                                   | A large individual, somewhat weathered and broken.                                                                                                                                                                          |
| Darien, N. Y.<br>.....                                                            | As <i>Platyceras fornicatum</i> , var. Somewhat weathered.<br>See “ “ “ <i>contractum</i> .                                                                                                                                 |
| Cumberland, Md.<br>“ “                                                            | Eight silicified individuals.<br>Five silicified individuals.                                                                                                                                                               |
| Schoharie, N. Y.<br>.....                                                         | Five internal casts.<br>As <i>Platyceras dumosum</i> , var. <i>rarispinum</i> .                                                                                                                                             |
| The Helderbergs, N. Y.<br>Cumberland, Md.                                         | Internal cast retaining some shell.<br>Silicified individual, somewhat broken.                                                                                                                                              |
| Onondaga Co., N. Y.<br>Cumberland, Md.                                            | As <i>Platyceras (Orthonychia) perplexum</i> . Two individuals, one of<br>which has been compressed laterally.<br>Seven silicified individuals.                                                                             |
| Onondaga, N. Y.<br>.....<br>.....<br>.....                                        | Two large individuals. See also <i>Platyceras fornicatum</i> .<br>Specific name proposed.<br>As type of genus <i>Orthonychia</i> , but without a specific name.<br>“ <i>Platyceras (Orthonychia) subrectum</i> .<br>“ “ “ “ |
| Nr. Williamsville, N. Y.<br>.....                                                 | “ “ “ “ Imbedded individual de-<br>nuded of shell on exposed side. Locality is now in East Buffalo.<br>As <i>Platyceras (Orthonychia) subrectum</i> .                                                                       |
| The Helderbergs, N. Y.                                                            | “ “ “ “ Internal cast.                                                                                                                                                                                                      |
| Canandaigua L., N. Y.                                                             | Partly exfoliated.                                                                                                                                                                                                          |
| West Bloomfield, N. Y.<br>Schoharie, N. Y.<br>Cumberland, Md.<br>Schoharie, N. Y. | Nearly entire.<br>Four internal casts.<br>Six silicified individuals.<br>Internal cast.                                                                                                                                     |

Class GASTROPODA—Continued.

| Geol. Subdiv.           | Cat. No.          | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                   | REFERENCE.  |          |       |       |            |
|-------------------------|-------------------|-------------------|----------------------------------------------|-------------|----------|-------|-------|------------|
|                         |                   |                   |                                              | Work.       | Vol      | P.    | Pl.   | Figs.      |
| Orisk.                  | $\frac{2751}{1}$  | Type.             | ? (Platystoma ?)<br>callosum .....Hall.      | Pal. N. Y.  | 3        | 478   | 120   | 8a, b      |
| Ham.                    | $\frac{4906}{1}$  | "                 | Platystoma Conrad.<br>defiguratum .....Hall. | I. D. F.    | Gast.    | ....  | 9     | 24         |
|                         |                   |                   | "                                            | Pal. N. Y.  | 5, pt. 2 | 24    | 10    | 24         |
|                         |                   |                   | lichas.....                                  | .....       | .....    | ..... | ..... | .....      |
| U. H.                   | $\frac{2856}{8}$  | Fig'd.            | lineatum (Conrad) Hall.                      | I. D. F.    | Gast.    | ....  | 9     | 2-4, 9     |
| "                       | $\frac{2856}{7}$  | "                 | " " " "                                      | Pal. N. Y.  | 5, pt. 2 | 21    | 10    | 2-4, 9     |
| "                       | $\frac{2856}{7}$  | "                 | " " " "                                      | I. D. F.    | Gast.    | ....  | 9     | 5, 6       |
| "                       | $\frac{2856}{3}$  | "                 | " " " "                                      | Pal. N. Y.  | 5, pt. 2 | 21    | 10    | 5, 6       |
| "                       | $\frac{2856}{3}$  | "                 | " " " "                                      | I. D. F.    | Gast.    | ....  | 9     | 19         |
| "                       | $\frac{2856}{3}$  | "                 | " " " "                                      | Pal. N. Y.  | 5, pt. 2 | 21    | 10    | 19         |
| Ham.                    | $\frac{4907}{1}$  | Type.             | " var. sinuosum Hall.                        | I. D. F.    | Gast.    | ....  | 11    | 4, 5       |
| "                       | $\frac{4907}{2}$  | "                 | " " " "                                      | Pal. N. Y.  | 5, pt. 2 | 24    | 11    | 4, 5       |
| "                       | $\frac{4907}{2}$  | "                 | " " " "                                      | I. D. F.    | Gast.    | ....  | 11    | 6-8        |
| "                       | $\frac{4907}{2}$  | "                 | " " " "                                      | Pal. N. Y.  | 5, pt. 2 | 24    | 11    | 6-8        |
| U. H.                   | $\frac{4024}{1}$  | "                 | pleurotoma .....Hall.                        | I. D. F.    | Gast.    | ....  | 10    | 31-35      |
| "                       | $\frac{4022}{1}$  | "                 | "                                            | Pal. N. Y.  | 5, pt. 2 | 30    | 9     | 31-35      |
| "                       | $\frac{4022}{1}$  | "                 | strophius .....Hall.                         | N. Y. S. M. | 15       | 41    |       |            |
| "                       | $\frac{2857}{2}$  | "                 | "                                            | Pal. N. Y.  | 5, pt. 2 | 25    | ..... | .....      |
| "                       | $\frac{2857}{2}$  | "                 | turbinatum .....Hall.                        | N. Y. S. M. | 14       | 106   |       |            |
| "                       | $\frac{2857}{2}$  | "                 | "                                            | I. D. F.    | Gast.    | ....  | 10    | 14-21      |
| "                       | $\frac{2857}{2}$  | "                 | "                                            | Pal. N. Y.  | 5, pt. 2 | 27    | 9     | 14-21      |
| "                       | $\frac{2857}{3}$  | "                 | " " " " " "                                  | I. D. F.    | Gast.    | ....  | 10    | 22         |
| "                       | $\frac{2857}{3}$  | "                 | " " " " " "                                  | Pal. N. Y.  | 5, pt. 2 | 27    | 9     | 22         |
| "                       | $\frac{2857a}{3}$ | "                 | " var. cochleatum Hall.                      | I. D. F.    | Gast.    | ....  | 10    | 1, 2, 5-7  |
| "                       | $\frac{2857a}{3}$ | "                 | "                                            | Pal. N. Y.  | 5, pt. 2 | 28    | 9     | 1, 2, 5-7  |
| "                       | "                 | Fig'd.            | " var.....Hall.                              | I. D. F.    | Gast.    | ....  | 10    | 27         |
| "                       | $\frac{4023}{1}$  | Type.             | unisulcatum .....Conrad.                     | Pal. N. Y.  | 5, pt. 2 | 29    | 9     | 27         |
| "                       | $\frac{4023}{1}$  | Type.             | " Hall.                                      | J. A. N. S. | 8        | 271   | 16    | 9          |
| "                       | $\frac{4023}{1}$  | Type.             | "                                            | I. D. F.    | Gast.    | ....  | 10    | 25, 26     |
| "                       | $\frac{4023}{1}$  | Type.             | "                                            | Pal. N. Y.  | 5, pt. 2 | 26    | 9     | 25, 26     |
| Ham.                    | $\frac{4908}{1}$  | Fig'd.            | " var.... Hall.                              | I. D. F.    | Gast.    | ....  | 11    | 1-3        |
| "                       | $\frac{4908}{1}$  | Fig'd.            | "                                            | Pal. N. Y.  | 5, pt. 2 | 27    | 11    | 1-3        |
| Orisk.                  | $\frac{2694}{1}$  | "                 | ventricosum (Con.) Hall.                     | " "         | 3        | 469   | 112   | 1-6, 8, 10 |
| "                       | "                 | "                 | " " " "                                      | " "         | 3        | 469   | 112   | 7, 9       |
| "                       | "                 | "                 | " " " "                                      | " "         | 3        | 469   | 113   | 7, 8       |
| Pleurotomaria Defrance. |                   |                   |                                              |             |          |       |       |            |
| U. H.                   | $\frac{4232}{1}$  | Type.             | adjutor.....Hall.                            | " "         | 5, pt. 2 | 80    | 21    | 16         |
| "                       | $\frac{4232}{1}$  | Type.             | "                                            | I. D. F.    | Gast.    | ....  | 20    | 25         |
| Scho.                   | $\frac{2867}{1}$  | "                 | arata.....Hall.                              | N. Y. S. M. | 15       | 42    |       |            |
| "                       | "                 | "                 | "                                            | I. D. F.    | Gast.    | ....  | 17    | 1-3        |
| "                       | "                 | "                 | "                                            | Pal. N. Y.  | 5, pt. 2 | 64    | 17    | 1-3        |
| "                       | "                 | "                 | " " " " " "                                  | I. D. F.    | Gast.    | ....  | 17    | 4-6, 8     |
| "                       | "                 | "                 | "                                            | Pal. N. Y.  | 5, pt. 2 | 64    | 17    | 4-6, 8     |
| U. H.                   | $\frac{4033a}{1}$ | "                 | " var. clausa....                            | " "         | 5, pt. 2 | 65    | 17    | 9, 10      |
| "                       | $\frac{4033a}{1}$ | "                 | "                                            | I. D. F.    | Gast.    | ....  | 17    | 9, 10      |
| Ham.                    | $\frac{4032}{2}$  | Fig'd.            | capillaria (Conrad) ? Hall.                  | N. Y. S. M. | 15       | 45    | 5     | 2          |
| "                       | $\frac{4032}{2}$  | Fig'd.            | "                                            | I. D. F.    | Gast.    | ....  | 20    | 18, 19     |
| "                       | $\frac{4032}{2}$  | Fig'd.            | "                                            | Pal. N. Y.  | 5, pt. 2 | 77    | 20    | 18, 19     |
| U. H.                   | $\frac{4032}{1}$  | "                 | " " " ? "                                    | I. D. F.    | Gast.    | ....  | 12    | 25         |
| "                       | $\frac{4032}{1}$  | "                 | " " " ? "                                    | Pal. N. Y.  | 5, pt. 2 | 77    | 12    | 25         |
| "                       | $\frac{4909}{1}$  | Type.             | delicatula.....Hall.                         | I. D. F.    | Gast.    | ....  | 19    | 18, 19     |
| "                       | $\frac{4909}{1}$  | Type.             | "                                            | Pal. N. Y.  | 5, pt. 2 | 70    | 19    | 18, 19     |
| Ham.                    | $\frac{4910}{1}$  | "                 | disjuncta.....Hall.                          | I. D. F.    | Gast.    | ....  | 20    | 32         |
| "                       | $\frac{4910}{1}$  | "                 | "                                            | Pal. N. Y.  | 5, pt. 2 | 84    | 21    | 18         |
| doris .....             |                   |                   |                                              | .....       | .....    | ..... | ..... | .....      |



| LOCALITY.                      | REMARKS.                                                                 |
|--------------------------------|--------------------------------------------------------------------------|
| Cumberland, Md.                | Silicified individual.                                                   |
| Canandaigua L., N. Y.<br>..... | Individual with outer volution crushed.<br>See <i>Callonema lichas</i> . |
| Williamsville, N. Y.           | Two individuals.                                                         |
| Stafford, N. Y.                | Entire.                                                                  |
| Darien, N. Y.                  | An unusually large individual.                                           |
| Livingston Co., N. Y.          | A small individual.                                                      |
| Canandaigua L., N. Y.          | A large individual.                                                      |
| Onondaga, N. Y.                | Two individuals.                                                         |
| Port Colborne, Ont.            | Two siliceous casts.                                                     |
| Schoharie, N. Y.               | Four individuals showing degrees in the elevation of the spire.          |
| Onondaga, N. Y.                | An individual from the Indians' quarries.                                |
| “ “                            | Three specimens from the Indians' quarries.                              |
| “ “                            | A small individual.                                                      |
| Schoharie, N. Y.               | An individual somewhat imperfect about the aperture.                     |
| West Bloomfield, N. Y.         | Nearly entire.                                                           |
| Schoharie, N. Y.               | Seven internal casts, two of which (figs. 1, 5) retain some shell.       |
| “ “                            | A very flat individual.                                                  |
| “ “                            | Internal cast.                                                           |
| Near Dublin, Ohio.             | As <i>Pleurotomaria trilix</i> . Considerably exfoliated, siliceous.     |
| Schoharie, N. Y.               | Individual, somewhat compressed vertically.                              |
| “ “                            | Three casts.                                                             |
| Clarence Hollow, N. Y.         | As <i>Pleurotomaria</i> sp.? Internal cast.                              |
| Madison Co., N. Y.             | A compressed individual.                                                 |
| Williamsville, N. Y.           | Part of an internal cast, imbedded.                                      |
| Western New York.              | Preserves shell in part.                                                 |
| Catherine, N. Y.<br>.....      | Cast, much compressed. From a boulder.<br>See <i>Cyclonema doris</i> .   |

## Class GASTROPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                | REFERENCE.  |          |      |        |            |
|------------------|------------------|----------------------|-------------------------------------------|-------------|----------|------|--------|------------|
|                  |                  |                      |                                           | Work.       | Vol.     | P.   | Pl.    | Figs.      |
| U. H.            | $\frac{4030}{1}$ | Type.                | <b>Pleurotomaria</b> Deifr.— <i>Cont.</i> |             |          |      |        |            |
|                  |                  |                      | hebe. . . . . Hall.                       | N. Y. S. M. | 14       | 105  |        |            |
|                  |                  |                      | "                                         | "           | 15       | .... | 5      | 8          |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 19     | 2-7        |
| Ham.             | $\frac{4911}{1}$ | Type.                | "                                         | Pal. N. Y.  | 5, pt. 2 | 68   | 19     | 2-7        |
|                  |                  |                      | <i>imitator</i> . . . . .                 |             |          |      |        |            |
|                  |                  |                      | itys. . . . . Hall.                       | I. D. F.    | Gast.    | .... | 20     | 9, 10      |
|                  |                  |                      | "                                         | Pal. N. Y.  | 5, pt. 2 | 76   | 20     | 9, 10      |
| U. H.            | $\frac{4029}{1}$ | "                    | <i>Kearneyi</i> . . . . .                 |             |          |      |        |            |
|                  |                  |                      | lucina. . . . . Hall.                     | N. Y. S. M. | 15       | 42   | 5      | 12         |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 18     | 8, 9       |
|                  |                  |                      | "                                         | Pal. N. Y.  | 5, pt. 2 | 67   | 18     | 8, 9       |
| "                | $\frac{4029}{5}$ | "                    | "                                         | I. D. F.    | Gast.    | .... | 18     | 5, 6       |
|                  |                  |                      | "                                         | Pal. N. Y.  | 5, pt. 2 | 67   | 18     | 5, 6       |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 18     | 7          |
|                  |                  |                      | "                                         | Pal. N. Y.  | 5, pt. 2 | 67   | 18     | 7          |
| Ham.             | $\frac{4029}{7}$ | "                    | "                                         | I. D. F.    | Gast.    | .... | 18     | 10, 11     |
|                  |                  |                      | "                                         | Pal. N. Y.  | 5, pt. 2 | 67   | 18     | 10, 11     |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 18     | 1, 2       |
|                  |                  |                      | "                                         | Pal. N. Y.  | 5, pt. 2 | 67   | 18     | 1, 2       |
| U. H.            | $\frac{4029}{3}$ | "                    | "                                         | Geol. N. Y. | 4th D.   | 173  | ct. 68 | 4          |
|                  |                  |                      | "                                         | N. Y. S. M. | 15       | 42   | ....   |            |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 18     | 3, 4       |
|                  |                  |                      | "                                         | Pal. N. Y.  | 5, pt. 2 | 67   | 18     | 3, 4       |
| Ham.             | $\frac{4912}{1}$ | "                    | " <i>var. perfasciata</i> Hall.           | I. D. F.    | Gast.    | .... | 20     | 30, 31     |
|                  |                  |                      | "                                         | Pal. N. Y.  | 5, pt. 2 | 83   | 21     | 19, 20     |
|                  |                  |                      | plena . . . . . Hall.                     | I. D. F.    | Gast.    | .... | 17     | 11-13      |
|                  |                  |                      | "                                         | Pal. N. Y.  | 5, pt. 2 | 66   | 17     | 11-13      |
| Ham.             | $\frac{4913}{1}$ | "                    | rotalia . . . . . Hall.                   | N. Y. S. M. | 15       | 46   | 5      | 11         |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 19     | 20-23      |
|                  |                  |                      | "                                         | Pal. N. Y.  | 5, pt. 2 | 71   | 19     | 20-23      |
|                  |                  |                      | <i>rotunda</i> . . . . .                  |             |          |      |        |            |
| Mar.             | $\frac{4405}{3}$ | Type.                | <i>rugulata</i> . . . . . Hall.           | N. Y. S. M. | 13       | 108  |        |            |
|                  |                  |                      | "                                         | "           | 15       | .... | 5      | 4          |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 20     | 1-7        |
|                  |                  |                      | "                                         | Pal. N. Y.  | 5, pt. 2 | 75   | 20     | 1-7        |
| Ham.             | $\frac{4914}{1}$ | Fig'd.               | <i>sulcomarginata</i> (Con.) H.           | N. Y. S. M. | 15       | 46   | 5      | 10         |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 19     | 9-11       |
|                  |                  |                      | "                                         | Pal. N. Y.  | 5, pt. 2 | 69   | 19     | 9-11       |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 19     | 8          |
| "                | $\frac{4914}{2}$ | "                    | "                                         | Pal. N. Y.  | 5, pt. 2 | 69   | 19     | 8          |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 19     | 12, 16, 17 |
|                  |                  |                      | "                                         | Pal. N. Y.  | 5, pt. 2 | 69   | 19     | 12, 16, 17 |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 19     | 15         |
| "                | $\frac{4914}{3}$ | "                    | "                                         | Pal. N. Y.  | 5, pt. 2 | 69   | 19     | 15         |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 19     | 15         |
|                  |                  |                      | "                                         | Pal. N. Y.  | 5, pt. 2 | 79   | 21     | 15         |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 20     | 22         |
| "                | $\frac{4915}{1}$ | Type.                | <i>trilix</i> . . . . . Hall.             | N. Y. S. M. | 15       | 45   | 5      | 1          |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 20     | 23         |
|                  |                  |                      | "                                         | Pal. N. Y.  | 5, pt. 2 | 79   | 21     | 15         |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 20     | 22         |
| "                | $\frac{4915}{2}$ | "                    | "                                         | Pal. N. Y.  | 5, pt. 2 | 79   | 21     | 14         |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 20     | 22         |
|                  |                  |                      | "                                         | Pal. N. Y.  | 5, pt. 2 | 79   | 21     | 14         |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 20     | 22         |
| U. H.            | $\frac{4026}{1}$ | Fig'd.               | ? sp. . . . . Hall.                       | "           | 5, pt. 2 | .... | 11     | 10, 11     |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 11     | 10, 11     |
|                  |                  |                      | ? sp. . . . . Hall.                       | Pal. N. Y.  | 5, pt. 2 | .... | 11     | 12, 13     |
|                  |                  |                      | "                                         | I. D. F.    | Gast.    | .... | 11     | 12, 13     |
| "                | $\frac{4225}{1}$ | "                    | sp. . . . .                               | "           | Gast.    | .... | 17     | 9, 10      |
|                  |                  |                      | "                                         | "           | Gast.    | .... | 17     | 9, 10      |
|                  |                  |                      | "                                         | "           | Gast.    | .... | 17     | 9, 10      |
|                  |                  |                      | "                                         | "           | Gast.    | .... | 17     | 9, 10      |



| LOCALITY.                         | REMARKS.                                                                                          |
|-----------------------------------|---------------------------------------------------------------------------------------------------|
| Clarence Hollow, N.Y.<br>.....    | Three casts, two of which retain part of the shell as calcite.<br>See <i>Callonema imitator</i> . |
| Cumberland, Md.<br>.....          | Internal cast.<br>See <i>Palæotrochus Kearneyi</i> .                                              |
| Clarence Hollow, N.Y.             | Cast showing external features.                                                                   |
| Near Columbus, Ohio.              | Internal cast.                                                                                    |
| Near Batavia, N. Y.               | Internal cast of very large individual, “probably of this species.”                               |
| Skaneateles L., N. Y.<br>.....    | Compressed specimen showing external features.<br>As <i>Pleurotomaria rotunda</i> Hall.           |
| Falls of Ohio River.<br>.....     | Internal cast.<br>As type of <i>Euomphalus? rotundus</i> .                                        |
| .....                             | As one of the types of <i>Pleurotomaria lucina</i> .                                              |
| .....                             | As <i>Pleurotomaria rotunda</i> .                                                                 |
| Clarence Hollow, N.Y.             | Cast retaining some of shell substance, imbedded.                                                 |
| Skaneateles L., N. Y.             | Cast showing external and internal features.                                                      |
| The Helderbergs, N.Y.             | Cast showing external features.                                                                   |
| Near Pratt’s Falls, N.Y.<br>..... | Three individuals retaining some shell.<br>See <i>Pleurotomaria lucina</i> .                      |
| Manlius, N. Y.                    | Two internal casts and two individuals.                                                           |
| Delphi, N. Y.                     | A well preserved individual.                                                                      |
| Falls of Ohio River.              | Nearly entire.                                                                                    |
| Delphi, N. Y.                     | Three specimens, more or less denuded of shell.                                                   |
| Cumberland, Md.                   | Internal cast.                                                                                    |
| Seneca Lake, N. Y.                | Imbedded.                                                                                         |
| Outlet Keuka L., N.Y.             | Imbedded.<br>See also <i>Pleurotomaria adjutor</i> .                                              |
| Clarence Hollow, N.Y.             | As <i>Naticopsis? cretacea</i> H. & W. An imperfect internal cast.                                |
| Near Dublin, Ohio.<br>.....       | “ “ “ “ Internal cast.<br>See <i>Pleurotomaria arata</i> var. <i>clausa</i> .                     |

Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR. | REFERENCE.  |          |       |       |        |
|---------------|------------------|-------------------|----------------------------|-------------|----------|-------|-------|--------|
|               |                  |                   |                            | Work.       | Vol.     | P.    | Pl.   | Figs.  |
| Chem.         | $\frac{4916}{1}$ | Type.             | <b>Porcellia</b> Leveille. |             |          |       |       |        |
|               |                  |                   | nais.....Hall.             | N. Y. S. M. | 15       | 68    | ....  | .....  |
|               |                  |                   | “                          | “ “         | 15       | ....  | 6     | 5, 6   |
|               |                  |                   | “                          | I. D. F.    | Gast.    | ....  | 16    | 27, 28 |
|               |                  |                   | “                          | Pal. N. Y.  | 5, pt. 2 | 127   | 16    | 27, 28 |
|               |                  |                   |                            |             |          |       | 26    | 26, 27 |
|               |                  |                   | <i>rotatoria</i> .....     | .....       | .....    | ..... | ..... | .....  |
|               |                  |                   | <b>Strophostylus</b> Hall. |             |          |       |       |        |
| Orisk.        | $\frac{2756}{1}$ | Type.             | Andrewsi.....Hall.         | Pal. N. Y.  | 3        | 472   | 118   | 2      |
| “             | $\frac{2695}{1}$ | Fig'd.            | expansus.....Hall.         | “ “         | 3        | 470   | 114   | 3a, b  |
| “             | $\frac{2751}{1}$ | Type.             | Matheri.....Hall.          | “ “         | 3        | 471   | 118   | 1a, b  |
| “             | $\frac{2755}{1}$ | “                 | transversus.....Hall.      | “ “         | 3        | 470   | 114   | 1a-c   |
| Scho.         | $\frac{2862}{1}$ | “                 | unicus.....Hall.           | N. Y. S. M. | 15       | 41    |       |        |
|               |                  |                   | “                          | I. D. F.    | Gast.    | ....  | 11    | 14, 15 |
|               |                  |                   | “                          | Pal. N. Y.  | 5, pt. 2 | 30    | 11    | 14, 15 |
| U. H.         | $\frac{4025}{1}$ | “                 | varians.....Hall.          | I. D. F.    | Gast.    | ....  | 11    | 16-28  |
|               |                  |                   | “                          | Pal. N. Y.  | 5, pt. 2 | 31    | 11    | 16-28  |

Class PTEROPODA.

|        |                  |        |                                 |             |          |       |        |                |
|--------|------------------|--------|---------------------------------|-------------|----------|-------|--------|----------------|
| Port.  | $\frac{4917}{1}$ | Type.  | <b>Coleolus</b> Hall.           |             |          |       |        |                |
|        |                  |        | aciculus.....Hall.              | Geol. N. Y. | 4th D.   | 244   | ct.106 | 4              |
|        |                  |        | <b>Conularia</b> Miller.        |             |          |       |        |                |
| Ham.   | $\frac{4918}{1}$ | “      | crebristriata.....Hall.         | I. D. F.    | Pter.    | ....  | 29     | 8, 9           |
|        |                  |        | “                               | Pal. N. Y.  | 5, pt. 2 | 210   | 33     | 8, 9           |
| Orisk. | $\frac{2697}{1}$ | “      | desiderata.....Hall.            | “ “         | 3        | ....  | 72A    | 4              |
|        |                  |        | “                               | “ “         | 3        | 480   | ....   | .....          |
| Ham.   | $\frac{4919}{1}$ | Fig'd. | undulata (Conrad) Hall.         | I. D. F.    | Pter.    | ....  | 29     | 3, 4           |
|        |                  |        | “                               | Pal. N. Y.  | 5, pt. 2 | 208   | 33     | 3, 4           |
| “      | “                | “      | “ “ “                           | I. D. F.    | Pter.    | ....  | 29     | 5              |
|        |                  |        | “                               | Pal. N. Y.  | 5, pt. 2 | 208   | 33     | 5              |
|        |                  |        | sp.....                         | “ “         | 3        | 480   | ....   | .....          |
|        |                  |        | <b>Styliola</b> Lesueur.        |             |          |       |        |                |
| Gen.   | $\frac{4920}{1}$ | Type.  | fissurella.....Hall.            | Pal. N. Y.  | 5, pt. 2 | 178   | 31A    | 13, 23, 24, 30 |
|        |                  |        | <b>Tentaculites</b> Schlotheim. |             |          |       |        |                |
| Orisk. | $\frac{2699}{1}$ | “      | arenosus.....Hall.              | I. D. F.    | Pter.    | ....  | 26     | 1, 2           |
|        |                  |        | “                               | Pal. N. Y.  | 5, pt. 2 | 166   | 31     | 1, 2           |
| U. H.  | $\frac{4240}{1}$ | “      | bellulus.....Hall.              | I. D. F.    | Pter.    | ....  | 26     | 15, 16         |
|        |                  |        | “                               | Pal. N. Y.  | 5, pt. 2 | 169   | 31     | 15, 16         |
|        |                  |        | <i>fissurella</i> .....         | .....       | .....    | ..... | .....  | .....          |
| Gen.   | $\frac{4921}{1}$ | Type.  | gracilistriatus.....Hall.       | Pal. N. Y.  | 5, pt. 2 | 173   | 31     | 14             |
|        |                  |        | “                               | I. D. F.    | Pter.    | ....  | 26     | 14             |
| “      | “                | “      | “ ..... “                       | Pal. N. Y.  | 5, pt. 2 | 173   | 31A    | 47             |
|        |                  |        | <b>scalariformis</b> .....Hall. | “ “         | 5, pt. 2 | 167   | 31     | 11             |
|        |                  |        | “                               | I. D. F.    | Pter.    | ....  | 26     | 11             |
|        |                  |        | <i>sicula</i> .....             | .....       | .....    | ..... | .....  | .....          |
| Chem.  | $\frac{4922}{1}$ | Type.  | spicula.....Hall.               | I. D. F.    | Pter.    | ....  | 26     | 21-23          |
|        |                  |        | “                               | Pal. N. Y.  | 5, pt. 2 | 172   | 31     | 21-23          |
| “      | $\frac{4922}{2}$ | “      | “ ..... “                       | I. D. F.    | Pter.    | ....  | 26     | 24, 25         |
|        |                  |        | “                               | Pal. N. Y.  | 5, pt. 2 | 172   | 31     | 24, 25         |



| LOCALITY.                 | REMARKS.                                                                                                                            |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| .....                     | As <i>Gyroceras nais</i> .                                                                                                          |
| Chemung Narrows,<br>N. Y. | Cast, somewhat crushed.                                                                                                             |
| .....                     | See <i>Goniatites plebeiformis</i> .                                                                                                |
| Cumberland, Md.           | A silicified individual.                                                                                                            |
| Schoharie, N. Y.          | Internal cast.                                                                                                                      |
| Cumberland, Md.           | A silicified individual, somewhat broken.                                                                                           |
| “ “                       | A silicified individual.                                                                                                            |
| Schoharie, N. Y.          | Nearly entire.                                                                                                                      |
| Onondaga, N. Y.           | Seven individuals.                                                                                                                  |
| Cashaqua Creek, N. Y.     | As <i>Orthoceras aciculum</i> . Pyritized, imbedded.                                                                                |
| Genesee Valley, N. Y.     | Imprint retaining small fragments of shell.                                                                                         |
| Knox, N. Y.               | As <i>Conularia</i> sp. A small fragment, imbedded.                                                                                 |
| Cazenovia, N. Y.          | Cast, somewhat compressed.                                                                                                          |
| “ “                       | Exterior imprint of two segments.                                                                                                   |
| .....                     | See <i>Conularia desiderata</i> .                                                                                                   |
| Near Alden, N. Y.         | Four individuals imbedded in a slab with many others and with<br><i>Tentaculites gracilistriatus</i> , fig. 47, same plate.         |
| Near Clarksville, N. Y.   | Imbedded individual, shell wanting from exposed side.                                                                               |
| Near Dublin, Ohio.        | A silicified individual, imbedded.                                                                                                  |
| .....                     | See <i>Tentaculites gracilistriatus</i> .                                                                                           |
| Near Alden, N. Y.         | As “ <i>fissurella</i> . Part of an individual.                                                                                     |
| “ “                       | The specimen referred to this figure by Prof. Hall. Imbedded with<br><i>Styliola fissurella</i> , figs. 13, 23, 24, 30, same plate. |
| Delaware, Ohio.           | As <i>Tentaculites sicala</i> Hall. Large individual, imbedded with<br>many others.                                                 |
| .....                     | See <i>Tentaculites scalariformis</i> .                                                                                             |
| South of Ithaca, N. Y.    | A block bearing many imprints.                                                                                                      |
| Cortland, N. Y.           | A block bearing many imprints.                                                                                                      |

## Class CEPHALOPODA.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                   | REFERENCE.  |          |      |        |          |
|------------------|------------------|----------------------|------------------------------------------------------------------------------|-------------|----------|------|--------|----------|
|                  |                  |                      |                                                                              | Work.       | Vol.     | P.   | Pl.    | Figs.    |
|                  |                  |                      | <b>Aploceras</b> d'Orbigny.<br>( <b>Cyrtoceras</b> )<br><i>liratum</i> ..... |             |          |      |        |          |
|                  |                  |                      | <b>Clymenia</b> Münster.<br><i>complanata</i> .....<br><i>erato</i> .....    |             |          |      |        |          |
|                  |                  |                      | <b>Cyrtoceras</b> Goldfuss.<br><i>clavatum</i> .....<br><i>Conradi</i> ..... |             |          |      |        |          |
| Scho.            | $\frac{2880}{1}$ | Type.                | <i>eugenium</i> .....Hall.                                                   | I. D. F.    | Ceph.    | .... | 36     | 5        |
|                  |                  |                      | "                                                                            | Pal. N. Y.  | 5, pt. 2 | 369  | 36     | 5        |
|                  |                  |                      | "                                                                            | N. Y. S. M. | 15       | 74   | 7      | 6        |
| Chem.            | $\frac{4923}{1}$ | "                    | <i>hector</i> .....                                                          | Pal. N. Y.  | 5, pt. 2 | 364  | 90     | 12-14    |
| Mar.             | $\frac{4415}{1}$ | "                    | <i>liratum</i> .....Hall.                                                    | N. Y. S. M. | 15       | 72   | ....   | ....     |
|                  |                  |                      | "                                                                            | Pal. N. Y.  | 5, pt. 2 | 364  | 95     | I        |
|                  |                  |                      | <b>Gomphoceras</b> Sowerby.<br><i>abruptum</i> .....Hall.                    | " "         | 5, pt. 2 | 339  | 94     | I        |
| Scho.            | $\frac{2877}{1}$ | "                    | <i>clavatum</i> .....Hall.                                                   | I. D. F.    | Ceph.    | .... | 47     | 12, 13   |
|                  |                  |                      | "                                                                            | Pal. N. Y.  | 5, pt. 2 | 323  | 46     | 14, 15   |
| Mar.             | $\frac{4412}{1}$ | "                    | <i>Conradi</i> .....Hall.                                                    | N. Y. S. M. | 13       | 106  | ....   | ....     |
|                  |                  |                      | "                                                                            | " "         | 15       | .... | 8      | 8        |
|                  |                  |                      | "                                                                            | I. D. F.    | Ceph.    | .... | 47     | 1, 2, 11 |
|                  |                  |                      | "                                                                            | Pal. N. Y.  | 5, pt. 2 | 348  | 46     | 1-3      |
| U. H.            | $\frac{4054}{3}$ | "                    | <i>eximium</i> .....Hall.                                                    | N. Y. S. M. | 14       | 109  |        |          |
|                  |                  |                      | "                                                                            | I. D. F.    | Ceph.    | .... | 44     | I        |
|                  |                  |                      | "                                                                            | Pal. N. Y.  | 5, pt. 2 | 329  | 44     | I        |
| "                | $\frac{4054}{1}$ | "                    | "....."                                                                      | I. D. F.    | Ceph.    | .... | 44     | 2        |
|                  |                  |                      | "                                                                            | Pal. N. Y.  | 5, pt. 2 | 329  | 44     | 2        |
| Mar.             | $\frac{4413}{1}$ | "                    | <i>Fischeri</i> .....Hall.                                                   | N. Y. S. M. | 13       | 106  | ....   | ....     |
|                  |                  |                      | "                                                                            | I. D. F.    | Ceph.    | .... | 45     | 5, 6     |
|                  |                  |                      | "                                                                            | Pal. N. Y.  | 5, pt. 2 | 336  | 45     | 5, 6     |
| "                | $\frac{4414}{1}$ | "                    | <i>oviforme</i> .....Hall.                                                   | N. Y. S. M. | 13       | 105  | ....   | ....     |
|                  |                  |                      | "                                                                            | I. D. F.    | Ceph.    | .... | 45     | 1, 4     |
|                  |                  |                      | "                                                                            | Pal. N. Y.  | 5, pt. 2 | 344  | 45     | 1, 4     |
| Ham.             | $\frac{4925}{1}$ | "                    | <i>pingue</i> .....Hall.                                                     | " "         | 5, pt. 2 | 346  | 94     | 9        |
| "                | $\frac{4926}{1}$ | "                    | <i>raphanus</i> .....Hall.                                                   | " "         | 5, pt. 2 | 347  | 94     | 5        |
|                  |                  |                      | <b>Goniatites</b> de Haan.<br><i>bicostatus</i> .....Hall.                   | Geol. N. Y. | 4th D.   | 246  | ct.107 | 8        |
| Port.            | $\frac{4927}{1}$ | "                    | "                                                                            | I. D. F.    | Ceph.    | ...  | 72     | 9        |
|                  |                  |                      | "                                                                            | Pal. N. Y.  | 5, pt. 2 | 450  | 72     | 9        |
| "                | $\frac{4927}{2}$ | "                    | "....."                                                                      | N. Y. S. M. | 13       | 103  | ....   | 19, 20   |
|                  |                  |                      | "                                                                            | I. D. F.    | Ceph.    | .... | 72     | 8        |
|                  |                  |                      | "                                                                            | "           | "        | "    | 74     | I        |
|                  |                  |                      | "                                                                            | Pal. N. Y.  | 5, pt. 2 | 450  | 72     | 8        |
|                  |                  |                      | "                                                                            | "           | "        | "    | 74     | I        |
| "                | $\frac{4927}{3}$ | "                    | ".....Hall.                                                                  | I. D. F.    | Ceph.    | .... | 72     | 10       |
|                  |                  |                      | "                                                                            | Pal. N. Y.  | 5, pt. 2 | 450  | 72     | 10       |



| LOCALITY.                      | REMARKS.                                                                                                    |
|--------------------------------|-------------------------------------------------------------------------------------------------------------|
| .....                          | See <i>Cyrtoceras liratum</i> .                                                                             |
| .....                          | “ <i>Goniatites complanatus</i> .                                                                           |
| .....                          | “ “ “                                                                                                       |
| .....                          | “ <i>Gomphoceras clavatum</i> .                                                                             |
| .....                          | “ “ <i>Conradi</i> .                                                                                        |
| Schoharie, N. Y.               | As type of <i>Orthoceras foliatum</i> . Longitudinal section of imbedded shell.                             |
| 8 miles South of Darien, N. Y. | Fragmentary internal cast. Generic reference queried in the explanation of the plate.                       |
| .....                          | As <i>Aploceras</i> ( <i>Cyrtoceras</i> ) <i>liratum</i> .                                                  |
| Marcellus, N. Y.               | Fragmentary internal cast.                                                                                  |
| Cazenovia, N. Y.               | Flattened cast bearing the type of <i>Hernodia humifusa</i> Hall, Pal. N. Y., vol. 6, pl. 65, figs. 20, 21. |
| .....                          | As <i>Cyrtoceras clavatum</i> .                                                                             |
| Albany Co., N. Y.              | Internal cast.                                                                                              |
| .....                          | As <i>Gomphoceras</i> ( <i>Apioceras</i> ) <i>Conradi</i> .                                                 |
| .....                          | “ “ “                                                                                                       |
| .....                          | “ <i>Cyrtoceras Conradi</i> .                                                                               |
| Manlius, N. Y.                 | Casts of small individual retaining some shell and of the outer chamber of a larger specimen.               |
| Columbus, Ohio.                | Internal cast.                                                                                              |
| Black Rock, N. Y.              | Internal cast, compressed.                                                                                  |
| .....                          | As <i>Gomphoceras</i> ( <i>Apioceras</i> ) <i>Fischeri</i> .                                                |
| Manlius, N. Y.                 | Part of an internal cast retaining some shell and part of an individual retaining shell.                    |
| .....                          | As <i>Gomphoceras</i> ( <i>Apioceras</i> ) <i>oviforme</i> .                                                |
| Schoharie, N. Y.               | Cast of an outer chamber and another specimen which retains most of the shell.                              |
| Cazenovia, N. Y.               | Internal cast, bearing casts of Bryozoa.                                                                    |
| “ “                            | Compressed fragment of a cast.                                                                              |
| Chautauqua Co., N. Y.          | Cast showing external features.                                                                             |
| Genesee River, N. Y.           | Internal cast in iron pyrites.                                                                              |
| Lake Erie, N. Y.               | Internal cast in iron pyrites.                                                                              |

## Class CEPHALOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.              | REFERENCE.  |          |      |         |         |
|---------------|------------------|-------------------|-----------------------------------------|-------------|----------|------|---------|---------|
|               |                  |                   |                                         | Work.       | Vol.     | P.   | Pl.     | Figs.   |
| Port.         | $\frac{4928}{1}$ | Type.             | <b>Goniatites</b> de Haan— <i>Cont.</i> |             |          |      |         |         |
|               |                  |                   | complanatus . . . . . Hall.             | Geol. N. Y. | 4th D.   | 244  | ct. 106 | 5       |
|               |                  |                   | "                                       | N. Y. S. M. | 15       | 63   | .....   | .....   |
|               |                  |                   | "                                       | "           | 27       | 132  | .....   | .....   |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 70      | 11      |
| Gen.          | $\frac{4928}{2}$ | "                 | "                                       | Pal. N. Y.  | 5, pt. 2 | 455  | 70      | 11      |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 70      | 8       |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 455  | 70      | 8       |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 70      | 10      |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 455  | 70      | 10      |
| Gen.          | $\frac{4928}{4}$ | Fig'd.            | "                                       | N. Y. S. M. | 15       | 64   | 10      | 1       |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 70      | 7       |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 455  | 70      | 7       |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 70      | 6       |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 455  | 70      | 6       |
| Chem.         | $\frac{4928}{6}$ | "                 | "                                       | I. D. F.    | Ceph.    | .... | 70      | 9       |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 455  | 70      | 9       |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 70      | 9       |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 455  | 70      | 9       |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 70      | 9       |
| Mar.          | $\frac{4420}{3}$ | Type.             | discoideus . . . . . Hall.              | N. Y. S. M. | 13       | 97   |         |         |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 71      | 2, 3    |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 441  | 71      | 2, 3    |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 71      | 7, 13   |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 441  | 71      | 7, 13   |
| Ham.          | $\frac{4420}{6}$ | "                 | "                                       | I. D. F.    | Ceph.    | .... | 71      | 10      |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 441  | 71      | 10      |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 71      | 11      |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 441  | 71      | 11      |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 71      | 12      |
| Port.         | $\frac{4420}{8}$ | "                 | "                                       | Pal. N. Y.  | 5, pt. 2 | 441  | 71      | 12      |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 71      | 12      |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 441  | 71      | 12      |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 71      | 12      |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 441  | 71      | 12      |
| U. H.         | $\frac{4243}{1}$ | Type.             | mithrax . . . . . Hall.                 | N. Y. S. M. | 13       | 98   | ....    | 7       |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 69      | 7       |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 433  | 69      | 7       |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 74      | 14      |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 464  | 72      | 3       |
| Port.         | $\frac{4929}{1}$ | "                 | Patersoni . . . . . Hall.               | N. Y. S. M. | 13       | 99   | ....    | 9, 10   |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 72      | 3       |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 464  | 72      | 3       |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 74      | 15      |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 464  | 72      | 1, 2    |
| Chem.         | $\frac{4929}{2}$ | "                 | "                                       | I. D. F.    | Ceph.    | .... | 72      | 1, 2    |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 464  | 72      | 1, 2    |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 72      | 4       |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 464  | 72      | 4       |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 16      | 25, 26  |
| Mar.          | $\frac{4418}{1}$ | "                 | plebeiformis . . . . . Hall.            | "           | 5, pt. 2 | 448  | 16      | 25, 26  |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 16      | 25, 26  |
|               |                  |                   | "                                       | Geol. N. Y. | 4th D.   | 244  | ct 106  | 6       |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 72      | 11      |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 460  | 72      | 11      |
| Ham.          | $\frac{4931}{1}$ | "                 | sinuosus . . . . . Hall.                | J. A. N. S. | 8        | 268  | 16      | 4       |
|               |                  |                   | "                                       | N. Y. S. M. | 13       | 98   | ....    | 6 (bis) |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 71      | 14      |
|               |                  |                   | "                                       | Pal. N. Y.  | 5, pt. 2 | 444  | 71      | 14      |
|               |                  |                   | "                                       | I. D. F.    | Ceph.    | .... | 74      | 2       |



| LOCALITY.                   | REMARKS.                                                                                                                     |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------|
| .....                       | As <i>Clymenia ? complanata</i> .                                                                                            |
| .....                       | “ “ “ “                                                                                                                      |
| .....                       | Referred to genus <i>Goniatites</i> .                                                                                        |
| .....                       | As <i>Goniatites (Clymenia ?) complanatus</i> .                                                                              |
| Livingston Co., N. Y.       | A crushed, pyritized individual, imbedded. From Shakers' Mill on Cashaqua creek.                                             |
| .....                       | As <i>Goniatites (Clymenia ?) complanatus</i> .                                                                              |
| Near Geneseo, N. Y.         | Compressed internal cast, imbedded.                                                                                          |
| .....                       | As <i>Goniatites (Clymenia ?) complanatus</i> .                                                                              |
| 18 Mile Creek, N. Y.        | Mould of exterior. From the shore of the lake.                                                                               |
| .....                       | As type of <i>Clymenia erato</i> .                                                                                           |
| .....                       | “ “ “ “                                                                                                                      |
| Moscow, N. Y.               | Compressed cast, imbedded.                                                                                                   |
| .....                       | As type of <i>Clymenia erato</i> .                                                                                           |
| Fall Brook, Geneseo, N. Y.  | Compressed cast, imbedded.                                                                                                   |
| .....                       | As <i>Goniatites (Clymenia ?) complanatus</i> .                                                                              |
| Western New York.           | Imbedded individual, “doubtfully referred to this species.” Probably from the Portage group. Shakers' Mill.                  |
| .....                       |                                                                                                                              |
| Schoharie, N. Y.            | Two compressed specimens retaining some shell.                                                                               |
| Cazenovia, N. Y.            | A somewhat compressed individual and a compressed internal cast.                                                             |
| Nr. Cayuga Lake, N. Y.      | Flattened individual, imbedded.                                                                                              |
| Near Portland Harbor, N. Y. | Compressed cast, imbedded.                                                                                                   |
| .....                       |                                                                                                                              |
| Western New York.           | A flattened individual.                                                                                                      |
| .....                       | See <i>Goniatites Vanuxemi</i> .                                                                                             |
| .....                       | Figure is one-half natural size.                                                                                             |
| Near Columbus, Ohio.        | Internal cast.                                                                                                               |
| Paterson's Creek, N. Y.     | Internal cast in iron pyrites, much damaged by oxidation. Livingston county.                                                 |
| Near Gibsonville, N. Y.     | Internal cast in iron pyrites. Ruined by oxidation, but a sulphur cast of the specimen in its original condition is present. |
| Pine Valley, N. Y.          | Part of a large individual. Locality is in Catherine township.                                                               |
| Cherry Valley, N. Y.        | As <i>Porcellia ? rotatoria</i> Hall. Internal cast of outer chamber.                                                        |
| Livingston Co., N. Y.       | Cast (of outer chamber?). From Cashaqua creek.                                                                               |
| Moscow, N. Y.               | Cast. Conrad's type, but the specimen is larger than his figure.                                                             |

## Class CEPHALOPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                                                                       | REFERENCE.  |          |      |      |        |
|------------------|------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------|----------|------|------|--------|
|                  |                  |                      |                                                                                                                                  | Work.       | Vol.     | P.   | Pl.  | Figs.  |
| Mar.             | $\frac{4416}{1}$ | Type.                | <b>Goniatites</b> de Haan— <i>Cont.</i><br><i>Vanuxemi</i> ..... <i>Hall.</i>                                                    | Pal. N. Y.  | 5, pt. 2 | 434  | 109  | 8      |
|                  |                  |                      | "                                                                                                                                | I. D. F.    | Ceph.    | .... | 64A  | 3      |
| "                | "                | "                    | " ..... "                                                                                                                        | " "         | Ceph.    | .... | 64A  | 4      |
| "                | "                | "                    | " ..... "                                                                                                                        | Pal. N. Y.  | 5, pt. 2 | 434  | 109  | 7      |
| "                | "                | "                    | " ..... "                                                                                                                        | I. D. F.    | Ceph.    | .... | 66   | 1, 2   |
| "                | "                | "                    | " ..... "                                                                                                                        | Pal. N. Y.  | 5, pt. 2 | 434  | 66   | 1, 2   |
| "                | "                | "                    | " ..... "                                                                                                                        | I. D. F.    | Ceph.    | .... | 67   | 1      |
| "                | "                | "                    | " ..... "                                                                                                                        | Pal. N. Y.  | 5, pt. 2 | 434  | 67   | 1      |
| U. H.            | $\frac{4247}{2}$ | "                    | <b>Gyroceras</b> de Koninck.<br><i>cyclops</i> ..... <i>Hall.</i>                                                                | N. Y. S. M. | 15       | 68   |      |        |
|                  |                  |                      | "                                                                                                                                | I. D. F.    | Ceph.    | .... | 53   | 2, 3   |
| Ham.             | $\frac{4932}{1}$ | "                    | <i>eryx</i> ..... "                                                                                                              | Pal. N. Y.  | 5, pt. 2 | 387  | 103  | 1, 2   |
|                  |                  |                      | "                                                                                                                                | N. Y. S. M. | 15       | 67   |      |        |
| "                | "                | "                    | " ..... "                                                                                                                        | I. D. F.    | Ceph.    | .... | 48   | 1      |
| "                | "                | "                    | " ..... "                                                                                                                        | Pal. N. Y.  | 5, pt. 2 | 386  | 58   | 1      |
| U. H.            | $\frac{4061}{2}$ | Fig'd.               | <i>Matheri</i> ( <i>Conrad</i> )... <i>Hall.</i>                                                                                 | N. Y. S. M. | 15       | 66   | 103  | 3      |
|                  |                  |                      | "                                                                                                                                | I. D. F.    | Ceph.    | .... | 55   | 5, 6   |
|                  |                  |                      | "                                                                                                                                | Pal. N. Y.  | 5, pt. 2 | 377  | 55   | 1, 2   |
| U. H.            | $\frac{4056}{1}$ | Type.                | <i>nais</i> .....<br><i>nereus</i> ..... <i>Hall.</i>                                                                            | N. Y. S. M. | 15       | 67   | 9    | 5      |
|                  |                  |                      | "                                                                                                                                | I. D. F.    | Ceph.    | .... | 49   | 1-3    |
| Ham.             | $\frac{4933}{1}$ | Fig'd.               | sp. indet. .... <i>Hall.</i>                                                                                                     | Pal. N. Y.  | 5, pt. 2 | 373  | 51   | 4-6    |
|                  |                  |                      | "                                                                                                                                | "           | 5, pt. 2 | .... | 103  | 4      |
| "                | $\frac{4934}{1}$ | Type.                | <b>Nautilus</b> Breynius.<br><i>bucinum</i> ..... <i>Hall.</i>                                                                   | " "         | 5, pt. 2 | 412  | 107  | 2, 3   |
| "                | $\frac{4934}{2}$ | "                    | " ..... "                                                                                                                        | " "         | 5, pt. 2 | 412  | 107  | 4, 5   |
| "                | $\frac{4935}{1}$ | "                    | <i>cavus</i> ..... <i>Hall.</i>                                                                                                  | " "         | 5, pt. 2 | 416  | 106  | 1-3    |
| "                | $\frac{4936}{1}$ | "                    | <i>cornulum</i> ..... <i>Hall.</i>                                                                                               | I. D. F.    | Ceph.    | .... | 60   | 5, 6   |
|                  |                  |                      | "                                                                                                                                | Pal. N. Y.  | 5, pt. 2 | 414  | 60   | 5, 6   |
| Mar.             | $\frac{4419}{1}$ | Fig'd.               | ( <b>Discites</b> )<br><i>marcellensis</i> ( <i>Vanux.</i> ) <i>H.</i>                                                           | N. Y. S. M. | 13       | 103  | .... | ....   |
|                  |                  |                      | "                                                                                                                                | I. D. F.    | Ceph.    | .... | 65   | 2      |
|                  |                  |                      | "                                                                                                                                | Pal. N. Y.  | 5, pt. 2 | 428  | 65   | 2      |
| Ham.             | $\frac{4937}{1}$ | Type.                | <b>Orthoceras</b> Breynius.<br><i>aciculum</i> .....<br><i>ægea</i> ..... <i>Hall.</i>                                           | N. Y. S. M. | 15       | 80   |      |        |
|                  |                  |                      | "                                                                                                                                | Pal. N. Y.  | 5, pt. 2 | 295  | 82   | 12, 13 |
| Port.            | $\frac{4938}{1}$ | "                    | <i>atreus</i> ..... <i>Hall.</i><br><i>baculum</i> .....<br><i>bebryx</i> .....<br><i>bebryx</i> var. <i>cayuga</i> <i>Hall.</i> | " "         | 5, pt. 2 | 305  | 89   | 10, 11 |
| Chem.            | $\frac{4939}{1}$ | Type.                | "                                                                                                                                | I. D. F.    | Ceph.    | .... | 39   | 1      |
|                  |                  |                      | "                                                                                                                                | Pal. N. Y.  | 5, pt. 2 | 276  | 39   | 1      |
|                  |                  |                      | "                                                                                                                                | I. D. F.    | Ceph.    | .... | 39   | 1      |
| Ham.             | $\frac{4940}{1}$ | "                    | <i>cælamen</i> ..... <i>Hall.</i>                                                                                                | Pal. N. Y.  | 5, pt. 2 | 298  | 42   | 10     |
|                  |                  |                      | "                                                                                                                                | "           |          |      | 82   | 16     |
|                  |                  |                      | "                                                                                                                                | I. D. F.    | Ceph.    | .... | 42   | 10     |
| "                | "                | "                    | " ..... "                                                                                                                        | " "         | Ceph.    | .... | 43   | 15     |
| "                | $\frac{4941}{1}$ | Fig'd.               | <i>constrictum</i> ( <i>Vanux.</i> ) <i>H.</i>                                                                                   | Pal. N. Y.  | 5, pt. 2 | 298  | 43   | 15     |
|                  |                  |                      | "                                                                                                                                | "           | 5, pt. 2 | 288  | 84   | 13, 14 |
| "                | $\frac{4941}{2}$ | "                    | " ..... "                                                                                                                        | " "         | 5, pt. 2 | 288  | 85   | 5      |



| LOCALITY.            | REMARKS.                                                                                                                          |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Manlius, N. Y.       | As <i>Goniatites expansus</i> Vanuxem. Internal cast of outer chamber retaining some pyritized shell.                             |
| .....                | As <i>Goniatites expansus</i> Vanuxem.                                                                                            |
| Manlius, N. Y.       | Fragmentary cast retaining some shell.                                                                                            |
| .....                | As <i>Goniatites expansus</i> Vanuxem.                                                                                            |
| Manlius, N. Y.       | Individual retaining shell on outer chamber. Both figures are from the same specimen.                                             |
| .....                | As <i>Goniatites expansus</i> Vanuxem.                                                                                            |
| Manlius, N. Y.       | Cast of a large individual retaining shell over part of outer chamber.                                                            |
| .....                |                                                                                                                                   |
| Columbus, Ohio.      | Small fragment of large individual.                                                                                               |
| .....                |                                                                                                                                   |
| Near Milwaukee, Wis. | Septate fragment, cast.                                                                                                           |
| “ “ “                | Most of the outer volution of a very large internal cast.                                                                         |
| .....                |                                                                                                                                   |
| Near Catskill, N. Y. | Internal cast.                                                                                                                    |
| .....                | See <i>Porcellia nais</i> .                                                                                                       |
| .....                |                                                                                                                                   |
| Auburn, N. Y.        | Compressed internal cast of septate portion retaining some test.                                                                  |
| Near Milwaukee, Wis. | Part of an internal cast.                                                                                                         |
| .....                |                                                                                                                                   |
| Cumberland, Md.      | Cast.                                                                                                                             |
| Cayuga Lake, N. Y.   | Fragment showing surface markings.                                                                                                |
| Cumberland, Md.      | Cast.                                                                                                                             |
| .....                |                                                                                                                                   |
| Cazenovia, N. Y.     | Cast.                                                                                                                             |
| .....                | As type of <i>Nautilus (Discites) ornatus</i> Hall.                                                                               |
| Near Manlius, N. Y.  | Internal cast of a large individual.                                                                                              |
| .....                | See <i>Coleolus aciculum</i> .                                                                                                    |
| .....                |                                                                                                                                   |
| Madison Co., N. Y.   | Probably= <i>Orthoceras profundum</i> Hall. Shows some of the external features.                                                  |
| Penn Yan, N. Y.      | Casts of about ten chambers and of a single chamber.                                                                              |
| .....                | See <i>Orthoceras viator</i> .                                                                                                    |
| .....                | “ “ <i>bebryx</i> var. <i>cayuga</i> .                                                                                            |
| .....                |                                                                                                                                   |
| Cortland, N. Y.      | As “ <i>bebryx</i> . Internal cast somewhat flattened.                                                                            |
| .....                |                                                                                                                                   |
| North Bristol, N. Y. | “ “ <i>crotalum</i> Hall. Much flattened. Shows external features. The lower part of the specimen as represented has disappeared. |
| .....                | As <i>Orthoceras nuntium</i> Hall.                                                                                                |
| North Bristol, N. Y. | Small fragment preserving the test.                                                                                               |
| Cazenovia, N. Y.     | Two internal casts bearing <i>Reptaria stolonifera</i> , figs. 17-19, pl. 65, vol. 6, Pal. N. Y.                                  |
| Hamilton, N. Y.      | Internal cast. Bears locality ticket in Prof. Hall's handwriting.                                                                 |

Class CEPHALOPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.              | REFERENCE.  |            |            |     |             |
|------------------|------------------|----------------------|-----------------------------------------|-------------|------------|------------|-----|-------------|
|                  |                  |                      |                                         | Work.       | Vol.       | P.         | Pl. | Figs.       |
| Ham.             | <u>4941</u><br>1 | Fig'd.               | <b>Orthoceras</b> Breyn.— <i>Cont.</i>  | Pal. N. Y.  | 5, pt. 2   | 288        | 85  | 10          |
| "                | <u>4942</u><br>1 | Type.                | constrictum ( <i>Vanux.</i> ) <i>H.</i> | N. Y. S. M. | 15         | 78         |     |             |
|                  |                  |                      | crotalum ..... <i>Hall.</i>             | "           | I. D. F.   | Ceph. .... | 42  | 1           |
|                  |                  |                      | "                                       | Pal. N. Y.  | 5, pt. 2   | 296        | 42  | 1           |
| "                | <u>4942</u><br>2 | "                    | "                                       | I. D. F.    | Ceph. .... | 42         | 42  | 3, 4        |
|                  |                  |                      | "                                       | Pal. N. Y.  | 5, pt. 2   | 296        | 42  | 3, 4        |
| "                | <u>4942</u><br>3 | "                    | "                                       | I. D. F.    | Ceph. .... | 42         | 42  | 8, 9        |
|                  |                  |                      | "                                       | Pal. N. Y.  | 5, pt. 2   | 296        | 42  | 8, 9        |
| "                | <u>4943</u><br>1 | "                    | exile..... <i>Hall.</i>                 | N. Y. S. M. | 15         | 78         |     |             |
|                  |                  |                      | "                                       | Pal. N. Y.  | 5, pt. 2   | 290        | 85  | 1, 2        |
| "                | <u>4943</u><br>2 | "                    | "                                       | "           | 5, pt. 2   | 290        | 84  | 3           |
|                  |                  |                      | <i>foliatum</i> .....                   |             |            |            |     |             |
| Chem             | <u>4944</u><br>1 | Type.                | fulgidum..... <i>Hall.</i>              | Pal. N. Y.  | 5, pt. 2   | 310        | 90  | 3           |
| Ham.             | <u>4945</u><br>1 | "                    | idmon ..... <i>Hall.</i>                | "           | 5, pt. 2   | 302        | 43  | 11, 12      |
|                  |                  |                      | "                                       | I. D. F.    | Ceph. .... |            | 43  | 11, 12      |
| U. H.            | <u>4053</u><br>1 | "                    | inoptatum..... <i>Hall.</i>             | Pal. N. Y.  | 5, pt. 2   | 267        | 37  | 1           |
|                  |                  |                      | "                                       | I. D. F.    | Ceph. .... |            | 37  | 1           |
| Mar.             | <u>4411</u><br>1 | Fig'd.               | marcellense ( <i>Vanux.</i> ) <i>H.</i> | "           | Ceph. .... |            | 38  | 4, 9        |
| "                | "                | "                    | "                                       | Pal. N. Y.  | 5, pt. 2   | 278        | 38  | 4, 9        |
|                  |                  |                      | "                                       | I. D. F.    | Ceph. .... |            | 38  | 5           |
|                  |                  |                      | "                                       | Pal. N. Y.  | 5, pt. 2   | 278        | 38  | 5           |
|                  |                  |                      | "                                       |             |            |            | 83  | 2, 4, 5, 12 |
| "                | "                | "                    | "                                       | I. D. F.    | Ceph. .... |            | 38  | 6           |
|                  |                  |                      | "                                       | Pal. N. Y.  | 5, pt. 2   | 278        | 38  | 6           |
|                  |                  |                      |                                         |             |            |            | 113 | 18          |
| U. H.            | <u>2874</u><br>2 | Type.                | molestum..... <i>Hall.</i>              | I. D. F.    | Ceph. .... |            | 35  | 6           |
|                  |                  |                      | "                                       | Pal. N. Y.  | 5, pt. 2   | 265        | 35  | 13          |
| Ham.             | <u>4946</u><br>1 | "                    | nuntium..... <i>Hall.</i>               | N. Y. S. M. | 15         | 79         | 8   | 3           |
|                  |                  |                      | "                                       | I. D. F.    | Ceph. .... |            | 43  | 8           |
|                  |                  |                      | "                                       | Pal. N. Y.  | 5, pt. 2   | 299        | 43  | 8           |
| "                | <u>4946</u><br>2 | "                    | "                                       | N. Y. S. M. | 15         | 79         | 8   | 4           |
|                  |                  |                      | "                                       | I. D. F.    | Ceph. .... |            | 43  | 4, 5        |
|                  |                  |                      | "                                       | Pal. N. Y.  | 5, pt. 2   | 299        | 43  | 4, 5        |
| "                | <u>4946</u><br>3 | "                    | "                                       | I. D. F.    | Ceph. .... |            | 43  | 9           |
|                  |                  |                      | "                                       | Pal. N. Y.  | 5, pt. 2   | 299        | 43  | 9           |
| "                | <u>4946</u><br>4 | "                    | "                                       | I. D. F.    | Ceph. .... |            | 43  | 13          |
|                  |                  |                      | "                                       | Pal. N. Y.  | 5, pt. 2   | 299        | 43  | 13          |
| U. H.            | <u>4241</u><br>1 | "                    | ohioense..... <i>Hall.</i>              | "           | 5, pt. 2   | 236        | 35A | 8, 9        |
|                  |                  |                      | "                                       |             |            |            | 36  | 4           |
|                  |                  |                      | "                                       | I. D. F.    | Ceph. .... |            | 36  | 1           |
| Port.            | <u>4947</u><br>1 | "                    | pacator ..... <i>Hall.</i>              | Pal. N. Y.  | 5, pt. 2   | 307        | 89  | 2           |
| Scho.            | <u>2876</u><br>2 | "                    | pelops ..... <i>Hall.</i>               | N. Y. S. M. | 15         | 73         |     |             |
|                  |                  |                      | "                                       | I. D. F.    | Ceph. .... |            | 37  | 8           |
|                  |                  |                      | "                                       | Pal. N. Y.  | 5, pt. 2   | 233        | 37  | 3           |
|                  |                  |                      | " var. <i>ohioense</i> .....            |             |            |            |     |             |
| U. H.            | <u>4051</u><br>1 | "                    | profundum ..... <i>Hall.</i>            | N. Y. S. M. | 15         | 76         |     |             |
|                  |                  |                      | "                                       | I. D. F.    | Ceph. .... |            | 37  | 4, 6        |
|                  |                  |                      | "                                       | Pal. N. Y.  | 5, pt. 2   | 271        | 37  | 7, 9        |
| "                | <u>4050</u><br>1 | "                    | rudicula..... <i>Hall.</i>              | I. D. F.    | Ceph. .... |            | 37  | 7           |
|                  |                  |                      | "                                       | Pal. N. Y.  | 5, pt. 2   | 268        | 37  | 2           |
|                  |                  |                      |                                         |             |            |            | 112 | 1, 2        |
| Mar.             | <u>4409</u><br>1 | "                    | sicinus..... <i>Hall.</i>               | "           | 5, pt. 2   | 301        | 38  | 1, 2        |
|                  |                  |                      | "                                       | I. D. F.    | Ceph. .... |            | 38  | 1, 2        |
| Ham.             | <u>4948</u><br>1 | "                    | spissum..... <i>Hall.</i>               | Pal. N. Y.  | 5, pt. 2   | 287        | 85  | 6, 7        |



| LOCALITY.             | REMARKS.                                                                                                              |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| Cazenovia, N. Y.      | Internal cast, imbedded.                                                                                              |
| Schoharie Co., N. Y.  | Shows part of outer chamber. Much flattened. Imbedded.                                                                |
| Cazenovia, N. Y.      | Somewhat compressed cast preserving portion of test.                                                                  |
| Hamilton, N. Y.       | Somewhat flattened, partly septate. See also <i>Orthoceras cælamen</i> .                                              |
| Cumberland, Md.       | Internal cast which was used in the original description.                                                             |
| Lake Erie, N. Y.      | Flattened internal cast. From ten miles south of Buffalo.                                                             |
| .....                 | See <i>Cyrtoceras eugenium</i> .                                                                                      |
| Near Ithaca, N. Y.    | Internal cast,                                                                                                        |
| Moscow, N. Y.         | As <i>Orthoceras nuntium</i> , and probably is that species. Compressed, imbedded, shows some of external features.   |
| Western New York.     | As <i>Orthoceras molestum</i> Hall. An internal cast.                                                                 |
| .....                 | “ “ <i>typum</i> Sæmann.                                                                                              |
| Manlius, N. Y.        | Cast of outer chamber and three others, retaining some shell.                                                         |
| .....                 | As <i>Orthoceras typum</i> Sæmann.                                                                                    |
| Manlius, N. Y.        | Internal cast retaining some bits of shell.                                                                           |
| .....                 | As <i>Orthoceras typum</i> Sæmann.                                                                                    |
| Manlius, N. Y.        | Almost entire internal cast retaining small bits of shell.                                                            |
| Clarence Hollow, N.Y. | Internal cast. See also <i>Orthoceras inoptatum</i> .                                                                 |
| Cazenovia, N. Y.      | Septate cast.                                                                                                         |
| Moscow, N. Y.         | Partly crushed. Shows external features.                                                                              |
| Seneca Lake, N. Y.    | Imbedded and partly slickensided.                                                                                     |
| W. Bloomfield, N. Y.  | A much flattened fragment showing external features. See also <i>Orthoceras cælamen</i> and <i>Orthoceras idmon</i> . |
| Delaware, Ohio.       | As <i>Orthoceras pelops</i> var. <i>ohioense</i> . Internal cast of a large fragment.                                 |
| Ithaca, N. Y.         | Compressed internal cast.                                                                                             |
| Schoharie, N. Y.      | Cast of several chambers.                                                                                             |
| .....                 | See <i>Orthoceras ohioense</i> .                                                                                      |
| Williamsville, N. Y.  | Casts of outer chamber of two individuals. One retains some shell.                                                    |
| Stafford, N. Y.       | Internal cast showing the artificial sections.                                                                        |
| Schoharie, N. Y.      | As <i>Orthoceras subulatum</i> Hall. Nearly entire individual.                                                        |
| Pratt's Falls, N. Y.  | Internal cast and the matrix. The latter preserves the shell.                                                         |

Class CEPHALOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.             | REFERENCE.  |          |      |       |       |
|---------------|------------------|-------------------|----------------------------------------|-------------|----------|------|-------|-------|
|               |                  |                   |                                        | Work.       | Vol.     | P.   | Pl.   | Figs. |
| Mar.          | $\frac{4949}{1}$ | Type.             | <b>Orthoceras</b> Breyn.— <i>Cont.</i> |             |          |      |       |       |
|               |                  |                   | subulatum.....Hall.                    | Geol. N. Y. | 4th D.   | 180  | ct.71 | 1     |
|               |                  |                   | “                                      | N. Y. S. M. | 15       | 77   |       |       |
|               |                  |                   | “                                      | I. D. F.    | Ceph.    | .... | 38    | 3     |
| Ham.          | $\frac{4950}{1}$ | “                 | “                                      | Pal. N. Y.  | 5, pt. 2 | 283  | 38    | 3     |
|               |                  |                   | tersum.....Hall.                       | “ “         | 5, pt. 2 | 286  | 84    | 5     |
| Scho.         | $\frac{2875}{1}$ | “                 | thoas.....Hall.                        | N. Y. S. M. | 15       | 75   | 7     | 4     |
|               |                  |                   | “                                      | I. D. F.    | Ceph.    | .... | 41    | 4     |
| U. H.         | $\frac{2875}{3}$ | Fig'd.            | “                                      | Pal. N. Y.  | 5, pt. 2 | 261  | 41    | 4     |
|               |                  |                   | “ ?.....                               | I. D. F.    | Ceph.    | .... | 41    | 9     |
|               |                  |                   | “                                      | Pal. N. Y.  | 5, pt. 2 | 261  | 41    | 9     |
|               |                  |                   | <i>typus</i> .....                     |             |          |      |       |       |
| U. H.         | $\frac{2873}{2}$ | Type.             | viator.....Hall.                       | Pal. N. Y.  | 5, pt. 2 | 270  | 37    | 5     |
|               |                  |                   | “                                      | I. D. F.    | Ceph.    | .... | 37    | 2     |
| Ham.          | $\frac{4951}{1}$ | Fig'd.            | sp. indet.....Hall.                    | Pal. N. Y.  | 5, pt. 2 | ...  | 87    | 5     |
| “             | $\frac{4952}{1}$ | “                 | sp. indet.....Hall.                    | “ “         | 5, pt. 2 | .... | 87    | 6     |
| “             | $\frac{4953}{1}$ | Gen. and Sp. Type | <b>Trematoceras</b> Whitfield.         |             |          |      |       |       |
|               |                  |                   | ohioense.....Whitfield.                | N. Y. A. S. | 2        | 206  |       |       |
|               |                  |                   | “                                      | “ “         | 5        | 528  | 10    | 3, 4  |
|               |                  |                   | “                                      | Geol. O.    | 7        | 427  | 6     | 3, 4  |
| Scho.         | $\frac{2887}{1}$ | Type.             | <b>Trochoceras</b> Hall.               |             |          |      |       |       |
|               |                  |                   | clio.....Hall.                         | N. Y. S. M. | 14       | 108  |       |       |
|               |                  |                   | “                                      | Pal. N. Y.  | 5, pt. 2 | 392  | 59    | 5     |
| “             | $\frac{2885}{1}$ | “                 | discoideum.....Hall.                   | “ “         | 5, pt. 2 | 394  | 59    | 6     |
|               |                  |                   | “                                      | N. Y. S. M. | 15       | .... | 9     | 8     |
|               |                  |                   | “                                      | I. D. F.    | Ceph.    | .... | 59    | 3     |
| “             | “                | “                 | “ .....                                | “ “         | Ceph.    | .... | 59    | 5     |
|               |                  |                   | “                                      | Pal. N. Y.  | 5, pt. 2 | 394  | 59    | 7     |
| “             | $\frac{2883}{1}$ | “                 | eugenium.....Hall.                     | N. Y. S. M. | 14       | 108  |       |       |
|               |                  |                   | “                                      | I. D. F.    | Ceph.    | .... | 59    | 8     |
|               |                  |                   | “                                      | Pal. N. Y.  | 5, pt. 2 | 396  | 59    | 10    |
| “             | “                | “                 | “ .....                                | I. D. F.    | Ceph.    | .... | 48    | 4     |
|               |                  |                   | “                                      | Pal. N. Y.  | 5, pt. 2 | 396  | 58    | 4     |
| “             | “                | “                 | expansum.....Hall.                     | “ “         | 5, pt. 2 | 402  | 58    | 6     |
|               |                  |                   | “                                      | I. D. F.    | Ceph.    | .... | 48    | 6     |
| “             | $\frac{2889}{1}$ | “                 | obliquatum.....Hall.                   | “ “         | Ceph.    | .... | 48    | 5     |
|               |                  |                   | “                                      | Pal. N. Y.  | 5, pt. 2 | 401  | 58    | 5     |
|               |                  |                   | sp.....                                | I. D. F.    | Ceph.    | .... | 48    | 4     |

Subkingdom ARTHROPODA.

Class

|      |                  |                    |                                |             |   |     |    |    |
|------|------------------|--------------------|--------------------------------|-------------|---|-----|----|----|
| Mar. | $\frac{4421}{1}$ | Gen. and Sp. Type. | <b>Protobalanus</b> Whitfield. |             |   |     |    |    |
|      |                  |                    | hamiltonensis....Whitf.        | Pal. N. Y.  | 7 | 209 | 36 | 23 |
|      |                  |                    | “                              | A. M. N. H. | 2 | 67  | 13 | 22 |



| LOCALITY.                                                                           | REMARKS.                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bloomfield, N. Y.<br>Central New York.                                              | Nearly entire internal cast. See also <i>Orthoceras sicinus</i> .<br>Internal cast, imbedded.                                                                                                                                                                                                                                                                                                               |
| Schoharie, N. Y.<br>.....<br>Delaware, Ohio.<br>.....                               | Internal cast of outer chamber.<br>Specific reference not queried.<br>Cast "referred with doubt to this species."<br><br>See <i>Orthoceras marcellense</i> .                                                                                                                                                                                                                                                |
| Clarence Hollow, N.Y.<br>Skaneateles Lake, N.Y.                                     | As <i>Orthoceras baculum</i> Hall. Cast.<br>Crushed and slickensided, imbedded.                                                                                                                                                                                                                                                                                                                             |
| 18 Mile Creek, N. Y.                                                                | Crushed, imbedded, slickensided. From the lake shore.                                                                                                                                                                                                                                                                                                                                                       |
| Near Columbus, Ohio.                                                                | A weathered internal cast. From the Corniferous group?                                                                                                                                                                                                                                                                                                                                                      |
| Schoharie, N. Y.<br>.....<br>.....<br>Schoharie, N. Y.<br>.....<br>Schoharie, N. Y. | Internal cast. This species was made the type of the genus<br><i>Sphyrodoceras</i> by Hyatt, B. S. N. H., vol. 22, p. 298. See also<br><i>Trochoceras discoideum</i> .<br>The species was first described in the 15th Rept. N. Y. S. M., on<br>p. 64, but this specimen was not one of the original types.<br>As type of <i>Trochoceras clio</i> .<br>" " " " Internal cast.<br>" " " " "<br>Internal cast. |
| " "<br>.....<br>Schoharie, N. Y.                                                    | Internal cast. This species was made the type of the genus<br><i>Nædyceras</i> by Hyatt, B. S. N. H., vol. 22, p. 281.<br>As <i>Trochoceras</i> sp.<br>Internal cast.                                                                                                                                                                                                                                       |
| " "<br>.....<br>" "                                                                 | As a type of <i>Trochoceras obliquatus</i> . Internal cast.                                                                                                                                                                                                                                                                                                                                                 |
| " "<br>.....                                                                        | Internal cast, imbedded. See also <i>Trochoceras expansum</i> .<br>See <i>Trochoceras eugenium</i> .                                                                                                                                                                                                                                                                                                        |

CRUSTACEA.

Order CIRRIPEDIA.

|             |                            |
|-------------|----------------------------|
| Avon, N. Y. | The specimen as described. |
|-------------|----------------------------|

Order OSTRACODA.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                       | REFERENCE.  |      |    |     |        |
|---------------|------------------|-------------------|----------------------------------------------------------------------------------|-------------|------|----|-----|--------|
|               |                  |                   |                                                                                  | Work.       | Vol. | P. | Pl. | Figs.  |
| Ham.          | <u>4954</u><br>1 | Type.             | <b>Beyrichia</b> McCoy.<br><i>hamiltonensis</i> . . . . . <i>Jones.</i>          | Q. J. G. S. | 46   | 19 | 2   | 3      |
| "             | <u>4955</u><br>1 | "                 | <b>Entomis</b> Jones.<br><i>rhomboidea</i> . . . . . <i>Jones.</i>               | " "         | 46   | 10 | 2   | 9-10b  |
| "             | <u>4956</u><br>1 | "                 | <b>Isochilina</b> Jones.<br>? <i>fabacea</i> . . . . . <i>Jones.</i>             | " "         | 46   | 22 | 2   | 11     |
| "             | <u>4957</u><br>1 | "                 | <i>lineata</i> . . . . . <i>Jones.</i>                                           | " "         | 46   | 21 | 2   | 5a, b  |
| "             | <u>4957</u><br>2 | "                 | " . . . . . "                                                                    | " "         | 46   | 21 | 2   | 8a, b  |
| "             | <u>4958</u><br>1 | Fig'd.            | <b>Leperditia</b> Rouault.<br><i>hudsonica</i> ( <i>Hall</i> ) . . <i>Jones.</i> | " "         | 46   | 24 | 1   | 11a-c  |
| "             | <u>4959</u><br>1 | "                 | ? <i>seneca</i> ( <i>Hall</i> ) . . . . <i>Jones.</i>                            | " "         | 46   | 23 | 1   | 13, 14 |
| "             | <u>4960</u><br>1 | Type.             | <b>Primitia</b> Jones.<br><i>seminulum</i> . . . . . <i>Jones.</i>               | " "         | 46   | 5  | 2   | 2      |
| "             | <u>4961</u><br>1 | Fig'd.            | <b>Primitiopsis</b> Jones.<br><i>punctulifera</i> ( <i>Hall</i> ) <i>Jones.</i>  | " "         | 46   | 9  | 2   | 7a, b  |
| "             | <u>4961</u><br>2 | "                 | " " "                                                                            | " "         | 46   | 9  | 2   | 12a, b |
| "             | <u>4961</u><br>3 | "                 | " " "                                                                            | " "         | 46   | 9  | 2   | 13a, b |
| "             | <u>4962</u><br>1 | Type.             | <b>Strepula</b> Jones & Holl.<br><i>sigmoidalis</i> . . . . . <i>Jones.</i>      | " "         | 46   | 11 | 2   | 4      |

Order TRILOBITA.

|       |                  |        |                                                                                                                |                                         |                         |                          |                           |                          |
|-------|------------------|--------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------|-------------------------|--------------------------|---------------------------|--------------------------|
|       |                  |        | <b>Acidaspis</b> Murchison.<br><i>eriopis</i> . . . . .                                                        |                                         |                         |                          |                           |                          |
|       |                  |        | <b>Asaphus</b> Brongniart.<br><i>aspectans</i> . . . . .                                                       |                                         |                         |                          |                           |                          |
|       |                  |        | <b>Calymene</b> Brongniart.<br><i>nupera</i> . . . . .                                                         |                                         |                         |                          |                           |                          |
| Scho. | <u>2893</u><br>1 | Fig'd. | <b>Chasmops</b> McCoy . . . . .<br><i>anchiops</i> ( <i>Green</i> ) . . . <i>Hall.</i><br><i>H. &amp; C.</i>   | I. D. F.<br>Pal. N. Y.                  | Crust.<br>7             | ....<br>59               | 9<br>9                    | 1, 13<br>1, 10           |
| "     | "                | "      | " " . . . <i>Hall.</i><br><i>H. &amp; C.</i>                                                                   | I. D. F.<br>Pal. N. Y.                  | Crust.<br>7             | ....<br>59               | 10<br>10                  | 6, 7, 9<br>3, 4, 6       |
| U. H. | <u>4249</u><br>1 | Type.  | <i>calypso</i> . . . . . <i>Hall.</i><br>" "<br><i>H. &amp; C.</i>                                             | N. Y. S. M.<br>I. D. F.<br>Pal. N. Y.   | 15<br>Crust.<br>7       | 89<br>....<br>64         | ....<br>13<br>11A         | ....<br>1, 2<br>22       |
| "     | <u>4063</u><br>1 | "      | <b>Conolichas</b> Dames . . . . .<br><i>eriopis</i> . . . . . <i>Hall.</i><br>" "<br>" "<br><i>H. &amp; C.</i> | N. Y. S. M.<br>" "<br>" "<br>Pal. N. Y. | 15<br>16<br>Crust.<br>7 | 109<br>226<br>....<br>78 | ....<br>....<br>19<br>19A | ....<br>....<br>11<br>10 |
| "     | <u>4063</u><br>2 | "      | " ( <i>Hall</i> ) . . <i>H. &amp; C.</i>                                                                       | " "                                     | 7                       | 78                       | 19A                       | 6                        |
| "     | <u>4063</u><br>1 | "      | " " " "                                                                                                        | " "                                     | 7                       | 78                       | 19A                       | 12                       |



| LOCALITY.                                  | REMARKS.                                                                                                                                                 |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 18 Mile Creek, N. Y.                       | Left valve, imbedded with other type ostracodes. From the lake shore.                                                                                    |
| “ “                                        | = <i>Leperditia spinosa</i> Hall? Two left (?) valves, one of which is imbedded. From the lake shore.                                                    |
| “ “                                        | Left valve, imbedded with other type ostracodes. From the lake shore.                                                                                    |
| Monteith's Point,<br>Canandaigua L., N. Y. | Right valve of an adult.                                                                                                                                 |
| Moscow, N. Y.                              | Left valve of a young individual.                                                                                                                        |
| 18 Mile Creek, N. Y.                       | Right valve, imbedded with other type ostracodes. From the lake shore. Probably not of this species.                                                     |
| Ontario Co., N. Y.                         | Two right valves, imbedded with others.                                                                                                                  |
| 18 Mile Creek, N. Y.                       | A left valve, imbedded with other type ostracodes. From the lake shore.                                                                                  |
| Seneca Lake, N. Y.                         | Left valve.                                                                                                                                              |
| Darien, N. Y.                              | Left valve, imbedded.                                                                                                                                    |
| 18 Mile Creek, N. Y.                       | Entire shell. From the shore of the lake.                                                                                                                |
| “ “                                        | Left valve, imbedded with other type ostracodes. From the lake shore.                                                                                    |
| .....                                      | See <i>Conolichas eriopis</i> .                                                                                                                          |
| .....                                      | “ <i>Coronura aspectans</i> .                                                                                                                            |
| .....                                      | “ <i>Phacops nupera</i> .                                                                                                                                |
| .....                                      | Regarded by Hall & Clarke as a subgenus of <i>Dalmanites</i> .                                                                                           |
| .....                                      | As <i>Dalmanites anchiops</i> .                                                                                                                          |
| Schoharie, N. Y.                           | Internal cast small cephalon retaining some test, and the imperfect cast of a large one.                                                                 |
| .....                                      | As <i>Dalmanites anchiops</i> .                                                                                                                          |
| Schoharie, N. Y.                           | Two pygidia, imbedded separately.                                                                                                                        |
| .....                                      | As <i>Dalmania calypso</i> .                                                                                                                             |
| .....                                      | “ <i>Dalmanites</i> “                                                                                                                                    |
| Falls of Ohio River.                       | Exfoliated pygidium, imbedded.                                                                                                                           |
| .....                                      | Regarded by Hall & Clarke as a subgenus of <i>Lichas</i> .                                                                                               |
| .....                                      | As type of <i>Lichas armatus</i> Hall.                                                                                                                   |
| .....                                      | “ <i>Lichas eriopis</i> , the name <i>Lichas armatus</i> being preoccupied.                                                                              |
| .....                                      | “ <i>Acidaspis (Terataspis) eriopis</i> ?                                                                                                                |
| Nr. Williamsville, N. Y.                   | Imperfect internal cast of pygidium. From Young's quarry.                                                                                                |
| Schoharie, N. Y.                           | Cranidium, imbedded.                                                                                                                                     |
| Williamsville, N. Y.                       | Part of internal cast large pygidium retaining some test. Same block bears <i>Aviculopecten terminalis</i> H., Pal. N. Y., vol. 5, pt. 1, pl. 1, fig. 3. |

Order TRILOBITA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp.                                               | GENUS, SPECIES AND AUTHOR.                 | REFERENCE.  |        |       |       |       |
|------------------|------------------|--------------------------------------------------------------------|--------------------------------------------|-------------|--------|-------|-------|-------|
|                  |                  |                                                                    |                                            | Work.       | Vol.   | P.    | Pl.   | Figs. |
| U. H.            | $\frac{4065}{1}$ | Gen. and<br>Sp.Type.                                               | <b>Coronura</b> Hall & Clarke....          | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | aspectans ..... <i>Conrad</i> .            | Geol. N. Y. | 1841   | 49    | I     | 9     |
|                  | $\frac{4250}{1}$ | Fig'd Sp.<br>and G. T.                                             | " ..... <i>Hall</i> .                      | N. Y. S. M. | 15     | 88    | ..... | ..... |
|                  |                  |                                                                    | " ..... <i>H. &amp; C.</i>                 | I. D. F.    | Crust. | ..... | 13    | 7     |
|                  |                  |                                                                    | " (Conrad) <i>Hall</i> .                   | Pal. N. Y.  | 7      | 33    | 13    | 2     |
|                  |                  |                                                                    | " ..... <i>H. &amp; C.</i>                 | N. Y. S. M. | 15     | 89    | ..... | ..... |
|                  | $\frac{4250}{2}$ | "                                                                  | " ..... <i>H. &amp; C.</i>                 | I. D. F.    | Crust. | ..... | 13    | 12    |
|                  |                  |                                                                    | " ..... <i>H. &amp; C.</i>                 | Pal. N. Y.  | 7      | 33    | 13    | 7     |
|                  | $\frac{4250}{1}$ | "                                                                  | " ..... <i>Hall</i> .                      | I. D. F.    | Crust. | ..... | 13    | 13    |
|                  |                  |                                                                    | " ..... <i>H. &amp; C.</i>                 | Pal. N. Y.  | 7      | 33    | 13    | 8     |
| Scho.            | $\frac{4250}{1}$ | "                                                                  | " ..... <i>Hall</i> .                      | I. D. F.    | Crust. | ..... | 13    | 14    |
|                  |                  |                                                                    | " ..... <i>H. &amp; C.</i>                 | Pal. N. Y.  | 7      | 33    | 13    | 11    |
|                  | $\frac{4070}{1}$ | Fig'd.                                                             | myrmecophorus ( <i>Green</i> )?            | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | " ..... <i>H. &amp; C.</i>                 | " "         | 7      | 37    | 11A   | 13    |
| Ham.             | $\frac{4963}{1}$ | Fig'd.                                                             | <b>Corycephalus</b> H. & C.....            | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | regalis ..... <i>Hall</i> .                | I. D. F.    | Crust. | ..... | 11    | 2-4   |
|                  | $\frac{4964}{1}$ | "                                                                  | " ..... <i>H. &amp; C.</i>                 | Pal. N. Y.  | 7      | 55    | 11    | 1-3   |
|                  |                  |                                                                    | " ..... <i>Hall</i> .                      | I. D. F.    | Crust. | ..... | 11    | I     |
| U. H.            | $\frac{4248}{1}$ | Type.                                                              | " ..... <i>H. &amp; C.</i>                 | Pal. N. Y.  | 7      | 55    | 11    | 4     |
|                  |                  |                                                                    | <b>Cryphæus</b> Green.....                 | .....       | .....  | ..... | ..... | ..... |
|                  | $\frac{4963}{1}$ | "                                                                  | Boothi ( <i>Green</i> )..... <i>Hall</i> . | I. D. F.    | Crust. | ..... | 16    | 9     |
|                  |                  |                                                                    | " ..... <i>H. &amp; C.</i>                 | Pal. N. Y.  | 7      | 42    | 16A   | 3     |
| $\frac{4964}{1}$ | "                | Boothi <i>Green</i> ,<br>var. calliteles ( <i>Grn.</i> ) <i>H.</i> | I. D. F.                                   | Crust.      | .....  | 16    | 13    |       |
|                  |                  | " ..... <i>H. &amp; C.</i>                                         | Pal. N. Y.                                 | 7           | 45     | 16A   | 9     |       |
| Chem.            | $\frac{4965}{1}$ | "                                                                  | pleione..... <i>Hall</i> .                 | N. Y. S. M. | 15     | 90    | ..... | ..... |
|                  |                  |                                                                    | " ..... <i>H. &amp; C.</i>                 | I. D. F.    | Crust. | ..... | 16    | 17    |
|                  | $\frac{4076}{1}$ | "                                                                  | " ..... <i>H. &amp; C.</i>                 | Pal. N. Y.  | 7      | 41    | 16A   | 2     |
|                  |                  |                                                                    | <b>Cyphaspis</b> Burmeister.               | .....       | .....  | ..... | ..... | ..... |
| U. H.            | $\frac{4965}{1}$ | "                                                                  | lævis..... <i>Hall</i> .                   | I. D. F.    | Crust. | ..... | 21    | 29    |
|                  |                  |                                                                    | " ..... <i>H. &amp; C.</i>                 | Pal. N. Y.  | 7      | 150   | 21    | 29    |
|                  | $\frac{4076}{1}$ | "                                                                  | minuscula ..... <i>Hall</i> .              | I. D. F.    | Crust. | ..... | 20    | 17    |
|                  |                  |                                                                    | " ..... <i>H. &amp; C.</i>                 | Pal. N. Y.  | 7      | 140   | 20    | 17    |
| Ham.             | $\frac{4966}{1}$ | "                                                                  | ornata ..... <i>Hall</i> .                 | I. D. F.    | Crust. | ..... | 21    | I     |
|                  |                  |                                                                    | " ..... <i>H. &amp; C.</i>                 | Pal. N. Y.  | 7      | 145   | 21    | I     |
| Scho.            | "                | "                                                                  | <i>Dalmania</i> Emmrich.....               | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | ægeria.....                                | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | adspectans.....                            | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | calypso.....                               | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | coronata.....                              | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | helena.....                                | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | pleione.....                               | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | <b>Dalmanites</b> Barrande.                | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | ægeria.....                                | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | anchiops.....                              | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | aspectans.....                             | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | Boothii.....                               | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | calypso.....                               | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | coronatus.....                             | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | helena.....                                | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | myrmecophorus.....                         | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | pleione.....                               | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | regalis.....                               | .....       | .....  | ..... | ..... | ..... |
|                  |                  |                                                                    | selenurus.....                             | .....       | .....  | ..... | ..... | ..... |



| LOCALITY.              | REMARKS.                                                                        |
|------------------------|---------------------------------------------------------------------------------|
| .....                  | Defined as a subgenus of <i>Dalmanites</i> .                                    |
| .....                  | As <i>Asaphus aspectans</i> .                                                   |
| .....                  | “ <i>Dalmania adspectans</i> .                                                  |
| .....                  | “ <i>Dalmanites aspectans</i> .                                                 |
| The Helderbergs, N. Y. | Left eye and movable cheek, imbedded.                                           |
| .....                  | As type of <i>Dalmania helena</i> Hall.                                         |
| .....                  | “ “ “ “                                                                         |
| Near Columbus, O.      | Exfoliated pygidium, imbedded.                                                  |
| .....                  | As type of <i>Dalmanites helena</i> Hall.                                       |
| Near Delaware, O.      | Nearly entire external imprint of large pygidium. More likely to                |
| .....                  | have come from Delaware than from Columbus.                                     |
| .....                  | As type of <i>Dalmanites helena</i> Hall.                                       |
| Near Columbus, O.      | Imprint of under side of pygidium. Restored in figure.                          |
| Schoharie?, N. Y.      | Imperfect imprint of under side of glabella.                                    |
| .....                  | Defined as a subgenus of <i>Dalmanites</i> .                                    |
| .....                  | As <i>Dalmanites regalis</i> .                                                  |
| Knox, N. Y.            | Cast of under side of cephalon retaining a very little of the test.             |
| .....                  | As <i>Dalmanites regalis</i> .                                                  |
| Knox, N. Y.            | Imperfect cephalon, imbedded so as to show under side.                          |
| .....                  | Regarded by Hall & Clarke as a subgenus of <i>Dalmanites</i> .                  |
| .....                  | As <i>Dalmanites Boothii</i> .                                                  |
| Darien, N. Y.          | Small pygidium, imbedded.                                                       |
| .....                  | As <i>Dalmanites Boothii</i> .                                                  |
| Jaycox's Run, N. Y.    | An imperfect, somewhat exfoliated pygidium, imbedded. Living-                   |
| .....                  | ston county.                                                                    |
| .....                  | As <i>Dalmania pleione</i> .                                                    |
| .....                  | “ <i>Dalmanites pleione</i> .                                                   |
| Falls of Ohio River.   | Imperfect, exfoliated pygidium, imbedded.                                       |
| .....                  | As <i>Phillipsia lævis</i> .                                                    |
| Chemung Co., N. Y.     | Cast, somewhat compressed.                                                      |
| .....                  | As <i>Phillipsia minuscula</i> .                                                |
| Schoharie, N. Y.       | Individual, imbedded.                                                           |
| .....                  | As <i>Phillipsia?</i> ( <i>Brachymetopus?</i> ) <i>ornata</i> .                 |
| 18 Mile Creek, N. Y.   | Imperfect cephalon, imbedded.                                                   |
| .....                  | Replaced by <i>Dalmanites</i> Barrande.                                         |
| .....                  | See <i>Odontocephalus ægeria</i> .                                              |
| .....                  | “ <i>Coronura aspectans</i> .                                                   |
| .....                  | “ <i>Chasmops calypso</i> .                                                     |
| .....                  | “ <i>Odontocephalus?</i> <i>coronatus</i> .                                     |
| .....                  | “ <i>Coronura aspectans</i> .                                                   |
| .....                  | “ <i>Cryphæus pleione</i> .                                                     |
| .....                  | See <i>Odontocephalus ægeria</i> .                                              |
| .....                  | “ <i>Chasmops anchiops</i> .                                                    |
| .....                  | “ <i>Coronura aspectans</i> .                                                   |
| .....                  | “ <i>Cryphæus Boothi</i> and <i>Cryphæus Boothi</i> , var. <i>calliteles</i> .  |
| .....                  | “ <i>Chasmops calypso</i> .                                                     |
| .....                  | “ <i>Odontocephalus?</i> <i>coronatus</i> and <i>Odontocephalus selenurus</i> . |
| .....                  | “ <i>Coronura aspectans</i> .                                                   |
| .....                  | “ “ <i>myrmecophorus</i> .                                                      |
| .....                  | “ <i>Cryphæus pleione</i> .                                                     |
| .....                  | “ <i>Corycephalus regalis</i> .                                                 |
| .....                  | “ <i>Odontocephalus selenurus</i> .                                             |

Order TRILOBITA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                        | REFERENCE.  |        |       |       |             |
|------------------|------------------|----------------------|---------------------------------------------------|-------------|--------|-------|-------|-------------|
|                  |                  |                      |                                                   | Work.       | Vol.   | P.    | Pl.   | Figs.       |
| Ham.             | $\frac{4967}{1}$ | Fig'd.               | <b>Homalonotus</b> Koenig.                        |             |        |       |       |             |
|                  |                  |                      | Dekayi ( <i>Green</i> )..... <i>Hall.</i>         | I. D. F.    | Crust. | ....  | 2     | 3, 4        |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | Pal. N. Y.  | 7      | 7     | 2     | 3, 4        |
|                  |                  |                      | ..... <i>Hall.</i>                                | I. D. F.    | Crust. | ....  | 2     | 10          |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | Pal. N. Y.  | 7      | 7     | 2     | 10          |
|                  |                  |                      | ..... <i>Hall.</i>                                | I. D. F.    | Crust. | ....  | 4     | 1, 2        |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | Pal. N. Y.  | 7      | 7     | 4     | 4, 5        |
|                  |                  |                      | ..... <i>Hall.</i>                                | I. D. F.    | Crust. | ....  | 5     | 1-5, 9      |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | Pal. N. Y.  | 7      | 7     | 5     | 4-8, 12, 13 |
|                  |                  |                      | ..... <i>Hall.</i>                                | I. D. F.    | Crust. | ....  | 5     | 6, 7        |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | Pal. N. Y.  | 7      | 7     | 5     | 10, 11      |
|                  |                  |                      | ..... <i>Eaton.</i>                               | Geol. T. B. | 2d ed. | 34    | ....  | ....        |
| Orisk.           | $\frac{2701}{1}$ | Type.                | major..... <i>Whitfield.</i>                      | A. M. N. H. | 1      | 193   | 22    | ....        |
|                  |                  |                      | <b>Lichas</b> Dalman.                             |             |        |       |       |             |
|                  |                  |                      | <i>armatus</i> .....                              | .....       | .....  | ..... | ..... | .....       |
|                  |                  |                      | <i>eriopis</i> .....                              | .....       | .....  | ..... | ..... | .....       |
|                  |                  |                      | <i>grandis</i> .....                              | .....       | .....  | ..... | ..... | .....       |
|                  |                  |                      | <b>Nuttainia</b> Eaton.....                       | .....       | .....  | ..... | ..... | .....       |
|                  |                  |                      | <i>sparsa</i> .....                               | .....       | .....  | ..... | ..... | .....       |
|                  |                  |                      | <b>Odontocephalus</b> <i>Conrad</i> ...           | .....       | .....  | ..... | ..... | .....       |
|                  |                  |                      | <i>ægeria</i> ..... <i>Hall.</i>                  | N. Y. S. M. | 15     | 85    | ....  | ....        |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | I. D. F.    | Crust. | ....  | 12    | 3, 4        |
|                  |                  |                      | ..... <i>Hall.</i>                                | I. D. F.    | Crust. | ....  | 12    | 5, 6, 8-10  |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | Pal. N. Y.  | 7      | 53    | 11B   | 1, 2, 7-9   |
| U. H.            | $\frac{4067}{1}$ | Type.                | ? <i>coronatus</i> ..... <i>Hall.</i>             | N. Y. S. M. | 15     | 86    | ....  | ....        |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | I. D. F.    | Crust. | ....  | 12    | 17          |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | Pal. N. Y.  | 7      | 54    | 11B   | 12          |
|                  |                  |                      | <i>selenurus</i> ( <i>Eaton</i> )... <i>Hall.</i> | I. D. F.    | Crust. | ....  | 12    | 7           |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | Pal. N. Y.  | 7      | 49    | 12    | 13          |
|                  |                  |                      | ..... <i>Hall.</i>                                | I. D. F.    | Crust. | ....  | 12    | 14          |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | Pal. N. Y.  | 7      | 49    | 12    | 2           |
|                  |                  |                      | ..... <i>Hall.</i>                                | I. D. F.    | Crust. | ....  | 12    | 15          |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | Pal. N. Y.  | 7      | 49    | 11B   | 20          |
|                  |                  |                      | ..... <i>Hall.</i>                                | I. D. F.    | Crust. | ....  | 12    | 16          |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | Pal. N. Y.  | 7      | 49    | 12    | 4           |
|                  |                  |                      | <b>Phacops</b> Emmrich.                           |             |        |       |       |             |
| Ham.             | $\frac{4968}{1}$ | Type.                | <i>bombifrons</i> .....                           | .....       | .....  | ..... | ..... | .....       |
|                  |                  |                      | <i>cacapona</i> ..... <i>Hall.</i>                | N. Y. S. M. | 15     | 96    | ....  | ....        |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | I. D. F.    | Crust. | ....  | 8     | 18-20       |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | Pal. N. Y.  | 7      | 27    | 8     | 19-21       |
|                  |                  |                      | ..... <i>Hall.</i>                                | I. D. F.    | Crust. | ....  | 8     | 21-23       |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | Pal. N. Y.  | 7      | 27    | 8     | 22-24       |
|                  |                  |                      | <i>cristata</i> ..... <i>Hall.</i>                | N. Y. S. M. | 15     | 95    | ....  | ....        |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | I. D. F.    | Crust. | ....  | 6     | 8           |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | Pal. N. Y.  | 7      | 14    | 6     | 11          |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | Pal. N. Y.  | 7      | 14    | 6     | 11          |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | Pal. N. Y.  | 7      | 14    | 6     | 11          |
|                  |                  |                      | ..... <i>H. &amp; C.</i>                          | Pal. N. Y.  | 7      | 14    | 6     | 11          |



| LOCALITY.                   | REMARKS.                                                                                                  |
|-----------------------------|-----------------------------------------------------------------------------------------------------------|
| Near Hamilton, N. Y.        | Cast of small, closely rolled individual.                                                                 |
| East Worcester, N. Y.       | Incomplete cast of small cephalon.                                                                        |
| Madison Co., N. Y.          | Cast retaining doublure.                                                                                  |
| “ “                         | Cast of cephalon, a closely rolled, exfoliated individual and a cast of a pygidium.                       |
| Pratt's Falls, N. Y.        | Cast.                                                                                                     |
| .....                       | As the type of <i>Nuttainia sparsa</i> .                                                                  |
| Coeymans, N. Y.             | Weathered, imperfect cranidium.                                                                           |
| Near Kingston, N. Y.        | Part of a cast of a very large specimen. From the “5th Binne-water” dam.                                  |
| .....                       | See <i>Conolichas eriopis</i> .                                                                           |
| .....                       | “ “ “                                                                                                     |
| .....                       | “ <i>Terataspis grandis</i> .                                                                             |
| .....                       |                                                                                                           |
| .....                       | Synonym of <i>Trinucleus</i> .                                                                            |
| .....                       | See <i>Homalonotus Dekayi</i> .                                                                           |
| .....                       |                                                                                                           |
| .....                       | Regarded by Hall & Clarke as a subgenus of <i>Dalmanites</i> .                                            |
| .....                       | As <i>Dalmania ægeria</i> .                                                                               |
| .....                       | “ <i>Dalmanites ægeria</i> .                                                                              |
| Chittenango, N. Y.          | Imprint of under side of individual, almost entire.                                                       |
| .....                       | As <i>Dalmanites ægeria</i> .                                                                             |
| Williamsville, N. Y.        | Imprint of under side of cephalon and two imbedded pygidia the larger of which has lost most of test.     |
| .....                       | As <i>Dalmania coronata</i> .                                                                             |
| .....                       | “ <i>Dalmanites coronatus</i> .                                                                           |
| Near Auburn, N. Y.          | Pygidium and most of thorax, imbedded.                                                                    |
| .....                       | As <i>Dalmanites ægeria</i> .                                                                             |
| Near Ovid, N. Y.            | A group of casts. Block was found loose.                                                                  |
| .....                       | As <i>Dalmanites selenurus</i> .                                                                          |
| Near Auburn, N. Y.          | Large individual, nearly entire, imbedded.                                                                |
| .....                       | As a type of <i>Dalmanites coronatus</i> .                                                                |
| Western New York.           | An imbedded pygidium.                                                                                     |
| .....                       | As a type of <i>Dalmanites coronatus</i> .                                                                |
| Near Auburn, N. Y.          | A partly dismembered individual, imbedded.                                                                |
| .....                       |                                                                                                           |
| .....                       | See <i>Phacops cristata</i> .                                                                             |
| .....                       |                                                                                                           |
| Mouth of Cacapon River, Va. | Cast of cephalon and thorax and an incomplete cast of folded individual.                                  |
| ?                           | Cast of individual retaining small portions of the test, “referred with some hesitation to this species.” |
| Onondaga Co., N. Y.         | Pygidium and part of thorax, imbedded. From the Indian quarries.                                          |

Order TRILOBITA—*Continued.*

| Geol.<br>Subdiv. | Cat.<br>No.             | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.       | REFERENCE.  |        |      |         |         |
|------------------|-------------------------|----------------------|----------------------------------|-------------|--------|------|---------|---------|
|                  |                         |                      |                                  | Work.       | Vol.   | P.   | Pl.     | Figs.   |
| U. H.            | <u>4071</u><br><u>2</u> | Type.                | <b>Phacops Emmrich—Cont.</b>     |             |        |      |         |         |
|                  |                         |                      | cristata.....Hall.               | N. Y. S. M. | 15     | 95   | ....    | .....   |
|                  |                         |                      | " " " " " "                      | I. D. F.    | Crust. | .... | 6       | 20-25   |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 14   | 6       | 16-21   |
| "                | <u>4071</u><br><u>6</u> | "                    | " " " " " "                      | N. Y. S. M. | 15     | 95   | ....    | .....   |
|                  |                         |                      | " " " " " "                      | I. D. F.    | Crust. | .... | 6       | 26, 27  |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 14   | 6       | 22, 23  |
| "                | <u>4071</u><br><u>1</u> | "                    | " " " " " "                      | N. Y. S. M. | 15     | 95   | ....    | .....   |
|                  |                         |                      | " " " " " "                      | I. D. F.    | Crust. | .... | 6       | 28, 29  |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 14   | 6       | 24, 25  |
| Chem.            | <u>4969</u><br><u>1</u> | "                    | nupera.....Hall.                 | Geol. N. Y. | 4th D. | 262  | ct. 116 | .....   |
|                  |                         |                      | " " " " " "                      | I. D. F.    | Crust. | .... | 8       | 26      |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 27   | 8       | 27      |
| U. H.            | <u>4252</u><br><u>1</u> | Fig'd.               | rana ( <i>Green</i> )?.....Hall. | I. D. F.    | Crust. | .... | 6       | 14, 15  |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 19   | 6       | 14, 15  |
| Ham.             | <u>4252</u><br><u>2</u> | "                    | " " " " " "                      | I. D. F.    | Crust. | .... | 7       | 2       |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 19   | 7       | 2       |
| "                | <u>4252</u><br><u>3</u> | "                    | " " " " " "                      | I. D. F.    | Crust. | .... | 7       | 3, 4    |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 19   | 7       | 3, 4    |
| "                | <u>4252</u><br><u>4</u> | "                    | " " " " " "                      | I. D. F.    | Crust. | .... | 8       | 1-3     |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 19   | 8       | 1-3     |
| "                | <u>4252</u><br><u>2</u> | "                    | " " " " " "                      | I. D. F.    | Crust. | .... | 8       | 4-7, 11 |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 19   | 8       | 4-7, 12 |
| "                | <u>4252</u><br><u>5</u> | "                    | " " " " " "                      | I. D. F.    | Crust. | .... | 8       | 8, 9    |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 19   | 8       | 8, 9    |
| "                | <u>4252</u><br><u>6</u> | "                    | " " " " " "                      | I. D. F.    | Crust. | .... | 8       | 13      |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 19   | 8       | 14      |
| "                | <u>4252</u><br><u>7</u> | "                    | " " " " " "                      | I. D. F.    | Crust. | .... | 8       | 17      |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 19   | 8       | 18      |
|                  |                         |                      | <b>Phaethonides Angelin.</b>     |             |        |      |         |         |
| Scho.            | <u>2895</u><br><u>1</u> | Type.                | arenicolus.....H. & C.           | " "         | 7      | 134  | 25      | 12      |
|                  |                         |                      | <b>Phillipsia Portlock.</b>      |             |        |      |         |         |
|                  |                         |                      | <i>laevis</i> .....              |             |        |      |         |         |
|                  |                         |                      | <i>minuscule</i> .....           |             |        |      |         |         |
|                  |                         |                      | ? <i>ornata</i> .....            |             |        |      |         |         |
|                  |                         |                      | <b>Proetus Steininger.</b>       |             |        |      |         |         |
| Scho.            | <u>2900</u><br><u>1</u> | Type.                | angustifrons .....Hall.          | N. Y. S. M. | 15     | 98   |         |         |
|                  |                         |                      | " " " " " "                      | I. D. F.    | Crust. | .... | 20      | I       |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 91   | 20      | I       |
| "                | <u>2900</u><br><u>2</u> | "                    | " " " " " "                      | I. D. F.    | Crust. | .... | 20      | 2, 4, 7 |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 91   | 20      | 2, 4, 5 |
| U. H.            | <u>4253</u><br><u>1</u> | "                    | canaliculatus.....Hall.          | N. Y. S. M. | 15     | 101  |         |         |
|                  |                         |                      | " " " " " "                      | I. D. F.    | Crust. | .... | 20      | 10, 11  |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 107  | 20      | 10, 11  |
| "                | <u>4075</u><br><u>1</u> | "                    | clarus.....Hall.                 | N. Y. S. M. | 15     | 99   |         |         |
|                  |                         |                      | " " " " " "                      | I. D. F.    | Crust. | .... | 20      | 12-14   |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 104  | 20      | 12-14   |
| Scho.            | <u>2899</u><br><u>2</u> | "                    | Conradi.....Hall.                | N. Y. S. M. | 15     | 97   |         |         |
|                  |                         |                      | " " " " " "                      | I. D. F.    | Crust. | .... | 20      | 6       |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 89   | 20      | 9       |
| "                | <u>2899</u><br><u>1</u> | "                    | " " " " " "                      | I. D. F.    | Crust. | .... | 21      | 27, 28  |
|                  |                         |                      | H. & C.                          | Pal. N. Y.  | 7      | 89   | 21      | 27, 28  |



| LOCALITY.              | REMARKS.                                                                           |
|------------------------|------------------------------------------------------------------------------------|
| .....                  | As a type of <i>Phacops bombifrons</i> .                                           |
| .....                  | “ “ “ “                                                                            |
| The Helderbergs, N. Y. | Internal casts of two cranidia.                                                    |
| .....                  | As a type of <i>Phacops bombifrons</i> .                                           |
| .....                  | “ “ “ “                                                                            |
| Clarence Hollow, N. Y. | Internal cast of cranidium.                                                        |
| .....                  | As a type of <i>Phacops bombifrons</i> Hall.                                       |
| .....                  | “ “ “ “                                                                            |
| Cayuga, Ont.           | A small cephalon, partly denuded of test.                                          |
| .....                  | As <i>Calymene nupera</i> .                                                        |
| Chemung Creek, N. Y.   | A weathered cast.                                                                  |
| Kelly's Island, Ohio.  | Nearly entire, somewhat exfoliated, imbedded.                                      |
| 18 Mile Creek, N. Y.   | A small individual, slightly crushed, imbedded. From the lake shore.               |
| Canandaigua L., N. Y.  | An enrolled individual.                                                            |
| Moscow, N. Y.          | Entire, enrolled.                                                                  |
| 18 Mile Creek, N. Y.   | A cephalon, an enrolled individual and an imperfect cephalon. From the lake shore. |
| Near Widder, Ont.      | An enrolled individual, slightly crushed.                                          |
| Near Geneva, N. Y.     | A partly exfoliated, somewhat weathered cephalon, imbedded.                        |
| Jaycox's Run, N. Y.    | Front of cephalon with hypostoma in place. Near Geneseo.                           |
| Schoharie, N. Y.       | An imperfect pygidium, imbedded.                                                   |
| .....                  | See <i>Cyphaspis laevis</i> .                                                      |
| .....                  | “ “ <i>minuscula</i> .                                                             |
| .....                  | “ “ <i>ornata</i> .                                                                |
| Albany Co., N. Y.      | Internal cast of glabella with some test remaining.                                |
| Schoharie, N. Y.       | Two somewhat exfoliated pygidia, imbedded.                                         |
| Falls of Ohio River.   | Cranidium, imbedded.                                                               |
| Stafford, N. Y.        | Two individuals, imbedded.                                                         |
| Albany Co., N. Y.      | A very perfect pygidium, imbedded.                                                 |
| .....                  | As <i>Proetus marginalis</i> Conrad.                                               |
| Schoharie, N. Y.       | Enrolled individual, nearly entire, partly exfoliated.                             |
|                        | See also <i>Proetus crassimarginatus</i> .                                         |

Order TRILOBITA—*Continued.*

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                           | REFERENCE.  |        |       |       |                |
|---------------|------------------|-------------------|----------------------------------------------------------------------|-------------|--------|-------|-------|----------------|
|               |                  |                   |                                                                      | Work.       | Vol.   | P.    | Pl.   | Figs.          |
| U. H.         | $\frac{2897}{6}$ | Type.             | <b>Proëtus</b> Steininger— <i>Cont.</i><br>crassimarginatus....Hall. | N. Y. S. M. | 15     | 100   |       |                |
|               |                  |                   | "                                                                    | I. D. F.    | Crust. | ....  | 20    | 20, 21, 25, 26 |
|               |                  |                   | H. & C.                                                              | Pal. N. Y.  | 7      | 99    | 20    | 20, 21, 25, 26 |
| "             | $\frac{2897}{4}$ | "                 | "                                                                    | I. D. F.    | Crust. | ....  | 20    | 22             |
|               |                  |                   | H. & C.                                                              | Pal. N. Y.  | 7      | 99    | 20    | 22             |
| "             | $\frac{2897}{3}$ | "                 | "                                                                    | I. D. F.    | Crust. | ....  | 20    | 28-31          |
|               |                  |                   | H. & C.                                                              | Pal. N. Y.  | 7      | 99    | 20    | 28-31          |
| Scho.         | $\frac{2897}{1}$ | "                 | "                                                                    | I. D. F.    | Crust. | ....  | 20    | 8, 9           |
|               |                  |                   | H. & C.                                                              | Pal. N. Y.  | 7      | 99    | 20    | 7, 8           |
| U. H.         | $\frac{2897}{6}$ | "                 | " (Hall) H. & C.                                                     | "           | 7      | 99    | 25    | 8              |
| Ham.          | $\frac{4970}{1}$ | Type.             | Haldemani.....Hall.                                                  | N. Y. S. M. | 15     | 102   |       |                |
|               |                  |                   | "                                                                    | I. D. F.    | Crust. | ....  | 21    | 9              |
|               |                  |                   | H. & C.                                                              | Pal. N. Y.  | 7      | 113   | 21    | 9              |
| Scho.         | $\frac{2898}{1}$ | "                 | hesione.....Hall.                                                    | N. Y. S. M. | 15     | 98    |       |                |
|               |                  |                   | "                                                                    | I. D. F.    | Crust. | ....  | 20    | 15, 16         |
|               |                  |                   | H. & C.                                                              | Pal. N. Y.  | 7      | 93    | 20    | 15, 16         |
| Ham.?         | $\frac{4971}{1}$ | "                 | longicauda.....Hall.                                                 | N. Y. S. M. | 15     | 108   |       |                |
|               |                  |                   | "                                                                    | I. D. F.    | Crust. | ....  | 20    | 32-34          |
|               |                  |                   | H. & C.                                                              | Pal. N. Y.  | 7      | 131   | 20    | 32-34          |
| Ham.          | $\frac{4972}{1}$ | "                 | macrocephalus.....Hall.                                              | N. Y. S. M. | 15     | 105   |       |                |
|               |                  |                   | "                                                                    | I. D. F.    | Crust. | ....  | 21    | 11             |
|               |                  |                   | H. & C.                                                              | Pal. N. Y.  | 7      | 116   | 21    | 11             |
| "             | $\frac{4972}{2}$ | "                 | "                                                                    | I. D. F.    | Crust. | ....  | 21    | 12             |
|               |                  |                   | H. & C.                                                              | Pal. N. Y.  | 7      | 116   | 21    | 12             |
| "             | $\frac{4972}{3}$ | "                 | "                                                                    | I. D. F.    | Crust. | ....  | 21    | 13             |
|               |                  |                   | H. & C.                                                              | Pal. N. Y.  | 7      | 116   | 21    | 13             |
| "             | $\frac{4972}{4}$ | "                 | "                                                                    | I. D. F.    | Crust. | ....  | 21    | 15, 20         |
|               |                  |                   | H. & C.                                                              | Pal. N. Y.  | 7      | 116   | 21    | 15, 20         |
| "             | $\frac{4972}{5}$ | "                 | "                                                                    | I. D. F.    | Crust. | ....  | 21    | 16             |
|               |                  |                   | H. & C.                                                              | Pal. N. Y.  | 7      | 116   | 21    | 16             |
|               |                  |                   | " var. a.....                                                        | .....       | .....  | ..... | ..... | .....          |
|               |                  |                   | marginalis.....                                                      | .....       | .....  | ..... | ..... | .....          |
| Ham.          | $\frac{4973}{1}$ | Type.             | occidens.....Hall.                                                   | N. Y. S. M. | 15     | 108   |       |                |
|               |                  |                   | "                                                                    | I. D. F.    | Crust. | ....  | 21    | 22, 23         |
|               |                  |                   | H. & C.                                                              | Pal. N. Y.  | 7      | 130   | 21    | 22, 23         |
| "             | $\frac{4974}{1}$ | Fig'd.            | Rowi (Green).....Hall.                                               | I. D. F.    | Crust. | ....  | 21    | 2, 3           |
|               |                  |                   | H. & C.                                                              | Pal. N. Y.  | 7      | 119   | 21    | 2, 3           |
| "             | $\frac{4974}{2}$ | "                 | " ".....Hall.                                                        | I. D. F.    | Crust. | ....  | 21    | 5              |
|               |                  |                   | H. & C.                                                              | Pal. N. Y.  | 7      | 119   | 21    | 5              |
| U. H.         | $\frac{4974}{1}$ | Type.             | Verneuili.....Hall.                                                  | N. Y. S. M. | 15     | 101   |       |                |
|               |                  |                   | "                                                                    | I. D. F.    | Crust. | ....  | 20    | 18, 19         |
|               |                  |                   | H. & C.                                                              | Pal. N. Y.  | 7      | 108   | 20    | 18, 19         |
| Scho.         | $\frac{2896}{2}$ | Fig'd.            | <b>Terataspis</b> Hall.....                                          | .....       | .....  | ..... | ..... | .....          |
|               |                  |                   | grandis (Hall) Whitfield.                                            | A. M. N. H. | 9      | 45    | ....  | 1-3            |



| LOCALITY.                       | REMARKS.                                                                                                                                                                                                                 |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Falls of Ohio River.            | Internal cast of glabella retaining some test, imbedded, and two imbedded pygidia.                                                                                                                                       |
| Clarence Hollow, N.Y.           | Large glabella mostly denuded of test.                                                                                                                                                                                   |
| Williamsville, N. Y.            | Internal casts of two pygidia, the smaller of which retains some test.<br>The original of figure 29 is supposed to be the specimen which was figured on page 172, Geol. N. Y., 4th D.<br>As <i>Proëtus Conradi</i> Hall. |
| .....<br>Albany Co., N. Y.      | Imperfect internal cast of pygidium.                                                                                                                                                                                     |
| Falls of Ohio River.            | A partly exfoliated individual, imbedded.                                                                                                                                                                                |
| Western New York.               | A small pygidium, imbedded.                                                                                                                                                                                              |
| Schoharie, N. Y.                | Internal cast of pygidium retaining a very little test.                                                                                                                                                                  |
| Northeast of<br>Des Moines, Ia. | Enrolled individual. Probably= <i>Phillipsia major</i> Shumard and of Lower Carboniferous age.                                                                                                                           |
| Jaycox's Run, N. Y.             | Somewhat exfoliated, imperfect individual. Livingston county.                                                                                                                                                            |
| Cayuga Lake, N. Y.              | A partly exfoliated individual lacking the free cheeks.                                                                                                                                                                  |
| York, N. Y.                     | Part of a flattened cephalon.                                                                                                                                                                                            |
| Near Geneseo, N. Y.             | A very perfect pygidium, imbedded.<br>As <i>Proëtus macrocephalus</i> , var. <i>a</i> , Hall.                                                                                                                            |
| .....                           |                                                                                                                                                                                                                          |
| 18 Mile Creek, N. Y.            | Small, mostly exfoliated pygidium, imbedded.<br>See <i>Proëtus macrocephalus</i> .                                                                                                                                       |
| .....                           |                                                                                                                                                                                                                          |
| .....                           | " " <i>Conradi</i> .                                                                                                                                                                                                     |
| Buffalo, Iowa.                  | A small, macerated pygidium and a larger exfoliated one, imbedded in separate blocks.                                                                                                                                    |
| Summit, N. Y.                   | Obliquely crushed, partly exfoliated individual. Schoharie county.                                                                                                                                                       |
| Otsego Co., N. Y.               | Imperfect matrix of an individual.                                                                                                                                                                                       |
| Williamsville, N. Y.            | Exfoliated pygidium with part of thorax, imbedded.                                                                                                                                                                       |
| .....                           | Regarded by Hall & Clarke as a subgenus of <i>Lichas</i> .                                                                                                                                                               |
| Paterson, N. J.                 | As <i>Lichas (Terastaspis) grandis</i> . Cast of a very large hypostoma, nearly entire, and of another, less perfect, one.                                                                                               |

Subkingdom VERTEBRATA.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                                                                | REFERENCE.                          |                          |                     |                       |                      |
|------------------|------------------|-----------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|---------------------|-----------------------|----------------------|
|                  |                  |                       |                                                                                                           | Work.                               | Vol.                     | P.                  | Pl.                   | Figs.                |
| U. H.            | <u>4260</u><br>1 | Gen. and<br>Sp, Type. | <b>Asterosteus</b> Newberry.<br>stenocephalus.. <i>Newberry.</i>                                          | Pal. Ohio.                          | 2                        | 36                  | 54                    | I                    |
| Cats-kill.       | <u>4975</u><br>1 | Type.                 | <b>Bothriolepis</b> Eichwald.<br>Leidyi . . . . . <i>Newberry.</i>                                        | P. F. N. A.                         | .....                    | III                 | 20                    | I                    |
| Cats-kill.       | <u>4976</u><br>1 | Fig'd.                | <b>Holoptychius</b> Agassiz.<br>americanus ( <i>Leidy</i> ) <i>Hall.</i>                                  | Geol. N. Y.                         | 4th D.                   | 28I                 | ct.130                | 2 (?)                |
| "                | "                | "                     | " " "                                                                                                     | " "                                 | 4th D.                   | 28I                 | ct.130                | 4                    |
| "                | <u>4977</u><br>1 | Type.                 | granulatus. . . . . <i>Newberry.</i><br><i>Hall.</i>                                                      | P. F. N. A.<br>Geol. N. Y.          | .....<br>4th D.          | 100<br>28I          | 20<br>ct.130          | 9<br>1<br>2          |
| Cats-kill.       | <u>4978</u><br>1 | Type.                 | <i>nobilissimus</i> Hall<br>( <i>non</i> Agassiz)<br>? radiatus. . . . . <i>Newberry.</i><br><i>Hall.</i> | .....<br>P. F. N. A.<br>Geol. N. Y. | .....<br>.....<br>4th D. | .....<br>115<br>28I | .....<br>20<br>ct.130 | .....<br>12, 14<br>3 |
| "                | <u>4979</u><br>1 | Gen. and<br>Sp. Type. | <b>Sauripteris</b> Hall.<br>Taylora. . . . . <i>Hall.</i><br>" " "                                        | " "<br>" "                          | 4th D.<br>1840           | 282<br>453          | ct.131<br>3<br>.....  | I<br>I, 3<br>.....   |
|                  |                  |                       | <i>Sauritolepis</i> Hall.....<br><i>Taylora</i> ... ..                                                    | .....<br>.....                      | .....<br>.....           | .....<br>.....      | .....<br>.....        | .....<br>.....       |



Class PISCES.

| LOCALITY.          | REMARKS.                                                                                                                                                                                                                                                                                                          |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Delaware, O.       | Specimen shows somewhat less bony matter than is indicated in figure.                                                                                                                                                                                                                                             |
| Nr. Blossburg, Pa. | Pectoral spine and left ant.vent. plate, imbedded so as to show interior.                                                                                                                                                                                                                                         |
| “ “                | As <i>Holoptychius nobilissimus</i> Agass. A scale doubtfully referred to this figure.                                                                                                                                                                                                                            |
| “ “                | As <i>Holoptychius nobilissimus</i> Agass. A detached tooth, imbedded.                                                                                                                                                                                                                                            |
| “ “                | As one of the types of <i>Sauripteris Taylora</i> Hall.<br>“ “ “ “ “ “ “ “ A scale which is probably the original of the figures in the 4th District Report and which was stated by Newberry to be the original of his figure.<br>..... See <i>Holoptychius americanus</i> Leidy and <i>H. radiatus</i> Newberry. |
| Nr. Blossburg, Pa. | As <i>Holoptychius nobilissimus</i> Agass. Two scales in same block.                                                                                                                                                                                                                                              |
| “ “                | As <i>Sauritolepis Taylora</i> , nomen nudum. A block containing a mandible, another containing the neural arch with paddle attached and a third bearing two scales.<br>..... Replaced by <i>Sauripteris</i> , q. v.<br>..... See <i>Sauripteris Taylora</i> .                                                    |

## ADDENDA ET CORRIGENDA.

Pages 78 and 79.

**Receptaculites** Pearyi *Whitfield*, Bul. A. M. N. H., Vol. 13, p. 19, pl. 1, fig. 1. Cape Harrison, Princess Marie Bay. Niagara? Group. Cat. No.  $\frac{1839}{1}$ . Type. The middle portion of a large colony.

Pages 80 and 81.

**Calapœcia** *Billings*.

**Calapœcia** borealis *Whitfield*, Bul. A. M. N. H., Vol. 13, p. 20, pl. 2, figs. 3-7. Cape Harrison, Princess Marie Bay. Niagara? Group. Cat. No.  $\frac{1838}{1}$ . Four weathered fragments of colonies.

Pages 84 and 85.

**Halysites** agglomeratiformis *Whitfield*, Bul. A. M. N. H., Vol. 13, p. 20, pl. 2, figs. 1, 2. Cape Harrison, Princess Marie Bay. Niagara? Group. Cat. No.  $\frac{1836}{1}$ . A weathered fragment and one which has been etched with acid.

**Heliolites** perelegans *Whitfield*, Bul. A. M. N. H., Vol. 13, p. 21, pl. 1, fig. 2. Cape Harrison, Princess Marie Bay. Niagara? Group. Cat. No.  $\frac{1837}{1}$ . Part of a colony with part of a *Receptaculites* surrounding it.

Page 110, line 9 from bottom. Instead of "Cat. P. F." read "Am. P. F."

Page 127, line 3 from bottom. Transfer marks of parenthesis to the word *Leptostrophia*.

Page 129, line 4. Transfer marks of parenthesis to the word *Leptostrophia*.

Page 140, line 11 from bottom. Insert ditto marks under "Type."

Page 148, line 13 from bottom. Instead of "*deformis*" read "deforme."

Page 160, line 19 from bottom. Instead of "cyrdiformis" read "cordiformis."

Page 170, line 16. Instead of "*bisulata*" read "*bisulcata*."

Page 186, line 4. Instead of "locustris" read "lacustris."

Page 188, line 16. Instead of "**Groptolithus**" read "**Graptolithus**."

Page 195, line 8 from bottom. Strike out period after "*cadens*."

Page 202, line 22 from bottom. Instead of "Fig'd" place ditto marks.

Page 203, lines 22 and 20 from bottom. Insert "As *Orthis unguiculus* Sowerby."

Page 204, lines 23 and 11 from bottom. Instead of ditto marks insert "Type."

Page 204, line 23 from bottom. Instead of "Schloth" read "*Schloth*."

Page 208. **Camarotœchia** carolina is out of order.

Page 215, line 5 from bottom. Insert "As *Cryptonella* (*Terebratula*) *eudora*."



Page 218, 8th column, lines 5, 9 and 10 from bottom. Instead of "10" read "19."

Pages 218 and 219. Under *Delthyris* insert "*Delthyris mesacostalis*... See *Spirifer mesicostalis*."

Page 219. The entry in the column of remarks opposite *Delthyris acuminata* should read "See *Spirifer mesicostalis*."

Page 219, line 24. Instead of "*mesastrialis*" read "*mesistrialis*."

Pages 220 and 221. **Douvillina** cayuta should be transferred to pages 218 and 219, and placed under Cat. No.  $\frac{4564}{2}$ .

Page 220, line 9 from bottom. Instead of "Owen" read "*Owen*."

Page 222, line 24. Instead of "mesacostale" read "mesicostale."

Page 233, line 10 and below. Instead of "*chemungense*" read "*chemungensis*."

Page 286, 1st column, line 2 from bottom. Instead of the ditto marks read "Ham."

Page 298, line 1. Instead of "**Palæosolen** Hall" read "**Panenka** Barr."

Page 308, 3d column, line 29, opposite **Vertumnia** reversa. Instead of "Fig'd Sp. and G. T." read "Gen. and Sp. Type."

References to the First Annual Report of the State Geologist of New York (for 1881, published in 1884) have been omitted from their proper places, there being nothing in the regular edition of the Palæontology of New York, Vol. 5, part 1, to lead to them. They are of little importance, but for the sake of completeness they are inserted here, as far as the specimens illustrated are in this Museum.

**Megalomus** canadensis *Hall*. Page 158 of this Catalogue.

Pal. N. Y., Vol. 5, pt. 1, pl. 52, fig. 10=S. G. N. Y., 1, pl. 9, fig. 16.

**Actinopteria** Boydi *Conrad*. Page 262.

Pal. N. Y., Vol. 5, pt. 1, pl. 19, figs. 15, 16=S. G. N. Y., 1, pl. 3, figs. 10, 11.

**Amnigenia** catskillensis *Vanuxem*. Page 262.

Pal. N. Y., Vol. 5, pt. 1, pl. 40, fig. 4=S. G. N. Y., 1, pl. 9, fig. 15.

**Aviculopecten** dolabriformis *Hall*. Page 264.

Pal. N. Y., Vol. 5, pt. 1, pl. 7, fig. 21=S. G. N. Y., 1, pl. 2, fig. 8.

**Aviculopecten** princeps *Conrad*. Page 266.

Pal. N. Y., Vol. 5, pt. 1, pl. 5, fig. 24=S. G. N. Y., 1, pl. 2, fig. 2.

**Aviculopecten** rugistriatus *Hall*. Page 266.

Pal. N. Y., Vol. 5, pt. 1, pl. 7, fig. 11=S. G. N. Y., 1, pl. 2, fig. 7.

**Conocardium** cuneus *var. trigonale* *Hall*. Page 268.

Pal. N. Y., Vol. 5, pt. 1, pl. 68, figs. 5, 13=S. G. N. Y., 1, pl. 9, figs. 4, 5, as *Conocardium trigonale*.

**Crenipecten** crenulatus *Hall*. Page 270.

Pal. N. Y., Vol. 5, pt. 1, pl. 9, fig. 17=S. G. N. Y., 1, pl. 1, fig. 8.

**Crenipecten** leon *Hall*. Page 270.

Pal. N. Y., Vol. 5, pt. 1, pl. 9, fig. 12=S. G. N. Y., 1, pl. 1, fig. 6.

**Cypricardella** tenuistriata *Hall & Whitfield*. Page 272.

Pal. N. Y., Vol. 5, pt. 1, pl. 73, fig. 23=S. G. N. Y., 1, pl. 6, fig. 3.

**Cypricardinia indenta** *Conrad*. Page 272.

Pal. N. Y., Vol. 5, pt. 1, pl. 79, fig. 13=S. G. N. Y., 1, pl. 11, fig. 11.

**Cytherodon nasutus** *Hall*. Page 272.

Pal. N. Y., Vol. 5, pt. 1, pl. 75, fig. 11=S. G. N. Y., 1, pl. 8, fig. 12, as *Schizodus nasutus*.

**Ectenodesma birostratum** *Hall*. Page 272.

Pal. N. Y., Vol. 5, pt. 1, pl. 23, fig. 27=S. G. N. Y., 1, pl. 4, fig. 18.

**Edmondia Philipi** *Hall & Whitfield*. Page 274.

Pal. N. Y., Vol. 5, pt. 1, pl. 64, fig. 14=S. G. N. Y., 1, pl. 10, fig. 8.

**Euthydesma subtextile** *Hall*. Page 274.

Pal. N. Y., Vol. 5, pt. 1, pl. 63, fig. 12=S. G. N. Y., 1, pl. 10, fig. 10, as *Cardiomorpha textilis*.

**Glyptodesma erectum** *Conrad*. Page 276.

Pal. N. Y., Vol. 5, pt. 1, pl. 11, fig. 4=S. G. N. Y., 1, pl. 4, fig. 3, as *Glyptodesma erectum*.

**Glyptodesma erectum** *var. obliquum* *Hall*. Page 276.

Pal. N. Y., Vol. 5, pt. 1, pl. 13, fig. 6=S. G. N. Y., 1, pl. 4, fig. 6, as *Glyptodesma erectum*.

**Goniophora hamiltonensis** *Hall & Whitfield*. Page 276.

Pal. N. Y., Vol. 5, pt. 1, pl. 43, fig. 18=S. G. N. Y., 1, pl. 6, fig. 13.

**Goniophora truncata** *Hall*. Page 276.

Pal. N. Y., Vol. 5, pt. 1, pl. 44, fig. 3=S. G. N. Y., 1, pl. 6, fig. 15.

**Gosselettia triquetra** *Conrad*. Page 278.

Pal. N. Y., Vol. 5, pt. 1, pl. 31, fig. 10=S. G. N. Y., 1, pl. 5, fig. 9.

**Grammysia bisulcata** *Conrad*. Page 278.

Pal. N. Y., Vol. 5, pt. 1, pl. 54, fig. 8=S. G. N. Y., 1, pl. 10, fig. 17.

**Grammysia globosa** *Hall & Whitfield*. Page 278.

Pal. N. Y., Vol. 5, pt. 1, pl. 62, fig. 18=S. G. N. Y., 1, pl. 10, fig. 11, as *Cardiomorpha cordatus*.

**Grammysia nodocostata** *Hall & Whitfield*. Page 280.

Pal. N. Y., Vol. 5, pt. 1, pl. 55, figs. 5, 6=S. G. N. Y., 1, pl. 10, figs. 19, 20.

**Grammysia (Sphenomya) cuneata** *Hall*. Page 280.

Pal. N. Y., Vol. 5, pt. 1, pl. 62, fig. 3=S. G. N. Y., 1, pl. 10, fig. 13.

**Limoptera cancellata** *Hall & Whitfield*. Page 284.

Pal. N. Y., Vol. 5, pt. 1, pl. 26, fig. 3=S. G. N. Y., 1, pl. 3, fig. 7.

**Limoptera macroptera** *Conrad*. Page 284.

Pal. N. Y., Vol. 5, pt. 1, pl. 26, fig. 7=S. G. N. Y., 1, pl. 3, fig. 5.

**Lunulicardium ornatum** *Hall*. Page 284.

Pal. N. Y., Vol. 5, pt. 1, pl. 71, fig. 26=S. G. N. Y., 1, pl. 10, fig. 2.

**Lyriopecten cymbalon** *Hall*. Page 286.

Pal. N. Y., Vol. 5, pt. 1, pl. 24, fig. 8=S. G. N. Y., 1, pl. 2, fig. 14.

**Lyriopecten interradiatus** *Hall*. Page 286.

Pal. N. Y., Vol. 5, pt. 1, pl. 2, fig. 1=S. G. N. Y., 1, pl. 2, fig. 13.

**Macrodon chemungensis** *Hall & Whitfield*. Page 286.

Pal. N. Y., Vol. 5, pt. 1, pl. 51, fig. 14=S. G. N. Y., 1, pl. 8, fig. 5.



**Macrodon** *hamiltoniæ* Hall & Whitfield. Page 286.

Pal. N. Y., Vol. 5, pt. 1, pl. 51, fig. 1=S. G. N. Y., 1, pl. 8, fig. 4.

**Megambonia** *cardiiformis* Hall. Page 286.

Pal. N. Y., Vol. 5, pt. 1, pl. 52, fig. 2=S. G. N. Y., 1, pl. 9, fig. 10, as *Megambonia subcordiformis*.

**Modiella** *pygmæa* Conrad. Page 288.

Pal. N. Y., Vol. 5, pt. 1, pl. 76, fig. 11=S. G. N. Y., 1, pl. 11, fig. 1.

**Modiola** (**Mytilops**) *præcedens* Hall & Whitfield. Page 288.

Pal. N. Y., Vol. 5, pt. 1, pl. 33, fig. 13=S. G. N. Y., 1, pl. 5, fig. 12, as *Modiola (Mytilops) præcedens*.

**Modiomorpha** *subalata* Conrad. Page 290.

Pal. N. Y., Vol. 5, pt. 1, pl. 39, fig. 9=S. G. N. Y., 1, pl. 6, fig. 10.

**Mytilarca** *carinata* Hall. Page 290.

Pal. N. Y., Vol. 5, pt. 1, pl. 32, fig. 16=S. G. N. Y., 1, pl. 5, fig. 7.

**Nucula** *Randalli* Hall & Whitfield. Page 292.

Pal. N. Y., Vol. 5, pt. 1, pl. 45, fig. 8=S. G. N. Y., 1, pl. 7, fig. 4.

Pal. N. Y., Vol. 5, pt. 1, pl. 45, fig. 27=S. G. N. Y., 1, pl. 7, fig. 5, as *Nucula lirata*.

**Nuculites** *oblongatus* Conrad. Page 292.

Pal. N. Y., Vol. 5, pt. 1, pl. 47, figs. 7, 11, 12=S. G. N. Y., 1, pl. 7, figs. 11-13.

**Nuculites** *triqueter* Conrad. Page 294.

Pal. N. Y., Vol. 5, pt. 1, pl. 47, fig. 19=S. G. N. Y., 1, pl. 7, fig. 15.

**Nyassa** *arguta* Hall & Whitfield. Page 294.

Pal. N. Y., Vol. 5, pt. 1, pl. 53, fig. 18=S. G. N. Y., 1, pl. 8, fig. 8.

**Nyassa** *subalata* Hall & Whitfield. Page 294.

Pal. N. Y., Vol. 5, pt. 1, pl. 53, fig. 25=S. G. N. Y., 1, pl. 8, fig. 9.

**Palæoneilo** *constricta* Conrad. Page 294.

Pal. N. Y., Vol. 5, pt. 1, pl. 48, fig. 8=S. G. N. Y., 1, pl. 7, fig. 16.

**Palæoneilo** *maxima* Conrad. Page 296.

Pal. N. Y., Vol. 5, pt. 1, pl. 48, fig. 33=S. G. N. Y., 1, pl. 7, fig. 17.

**Palæoneilo** *muta* Hall & Whitfield. Page 296.

Pal. N. Y., Vol. 5, pt. 1, pl. 49, fig. 30=S. G. N. Y., 1, pl. 7, fig. 20.

**Palæoneilo** *plana* Hall & Whitfield. Page 296.

Pal. N. Y., Vol. 5, pt. 1, pl. 48, fig. 26=S. G. N. Y., 1, pl. 7, fig. 18.

**Palæosolen** *siliquoideus* Hall & Whitfield. Page 296.

Pal. N. Y., Vol. 5, pt. 1, pl. 78, fig. 33=S. G. N. Y., 1, pl. 11, fig. 16, as *Orthonota siliquoidea*.

**Panenka** *robusta* Hall. Page 298.

Pal. N. Y., Vol. 5, pt. 1, pl. 70, fig. 22=S. G. N. Y., 1, pl. 10, fig. 4, as *Cardiola? robusta*.

**Paracyclas** *elliptica* Hall. Page 298.

Pal. N. Y., Vol. 5, pt. 1, pl. 72, fig. 32=S. G. N. Y., 1, pl. 9, fig. 9, as *Paracyclas elliptica* var. *occidentalis*.

**Phthonia** *cylindrica* Hall. Page 298.

Pal. N. Y., Vol. 5, pt. 1, pl. 78, fig. 2=S. G. N. Y., 1, pl. 11, fig. 20.

**Phthonia** sectifrons *Conrad*. Page 298.

Pal. N. Y., Vol. 5, pt. 1, pl. 78, fig. 11=S. G. N. Y., 1, pl. 11, fig. 19.

**Plethomytilus** ponderosus *Hall & Whitfield*. Page 300.

Pal. N. Y., Vol. 5, pt. 1, pl. 30, figs. 4, 5=S. G. N. Y., 1, pl. 5, figs. 1, 2, as *Mytilarca* (*Plethomytilus*) *ponderosa*.

**Prothyris** planulata *Hall*. Page 300.

Pal. N. Y., Vol. 5, pt. 1, pl. 76, fig. 1=S. G. N. Y., 1, pl. 11, fig. 6.

**Pterinea** flabella *Conrad*. Page 300.

Pal. N. Y., Vol. 5, pt. 1, pl. 14, fig. 17=S. G. N. Y., 1, pl. 3, fig. 3.

**Pterinopecten** undosus *Hall*. Page 302.

Pal. N. Y., Vol. 5, pt. 1, pl. 2, fig. 15=S. G. N. Y., 1, pl. 1, fig. 12.

**Pterinopecten** vertumnus *Hall*. Page 304.

Pal. N. Y., Vol. 5, pt. 1, pl. 5, fig. 8=S. G. N. Y., 1, pl. 1, fig. 14.

**Schizodus** chemungensis *Conrad*. Page 304.

Pal. N. Y., Vol. 5, pt. 1, pl. 75, fig. 39=S. G. N. Y., 1, pl. 8, fig. 14.

**Sphenotus** cuneatus *Conrad*. Page 308.

Pal. N. Y., Vol. 5, pt. 1, pl. 65, figs. 13, 14, 17=S. G. N. Y., 1, pl. 6, figs. 16-18, as *Sanguinolites* *cuneatus*.

**Tellinopsis** subemarginata *Conrad*. Page 308.

Pal. N. Y., Vol. 5, pt. 1, pl. 76, figs. 22, 23=S. G. N. Y., 1, pl. 11, figs. 9, 8, as *Tellinopsis* *emarginata*.

## ABBREVIATIONS USED IN PART III, WHICH HAVE NOT BEEN EXPLAINED IN PARTS I AND II.

### GEOLOGICAL SUBDIVISIONS.

|             |                                     |
|-------------|-------------------------------------|
| CHEM .....  | Chemung.                            |
| HAM.....    | Hamilton.                           |
| MAR.....    | Marcellus.                          |
| ORISK ..... | Oriskany.                           |
| PORT.....   | Portage.                            |
| SCHO .....  | Schoharie.                          |
| U. H.....   | Upper Helderberg<br>(=Corniferous). |

### AUTHORS' NAMES.

|              |                    |
|--------------|--------------------|
| DE K.....    | de Koninck.        |
| N. & P.....  | Norwood & Pratten. |
| ROMING ..... | C. Rominger.       |
| S. & Y ..... | Shumard & Yandel.  |
| SCHLOTH..... | Schlotheim.        |



OTHER ABBREVIATIONS.

ct, in column headed "Plate" . . cut.

t, " " " " . . table, and refers to the "Tables of Organic Remains" at the end of the "Survey of the Fourth Geological District" (of New York).

Tp . . . . . Township.

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Pl. & Ex. (6th col.). . Natural History of New York. Palæontology. Vol. 5, part 1. Lamellibranchiata. Plates and Explanations. 4to, Albany, 1883. Reference to this advance edition has been made in this Catalogue only when species were established therein, or were published differently from the regular edition of the volume.

P. N. L. S. . . . . Preliminary Notice of the Lamellibranchiate Shells of the Upper Helderberg, Hamilton and Chemung Groups, with others from the Waverly Sandstones. [Preparatory for the Palæontology of New York.] Part 2. This pamphlet was written by R. P. Whitfield, under an agreement of joint authorship with Prof. James Hall, but it was published anonymously in December, 1869, and January, 1870. See the initials R. P. W., on pp. 84, 91 and 93 of the pamphlet. The genera and species therein established are, accordingly, credited to Hall and Whitfield (H. & W.) in this Catalogue.

Syn. Am. Foss. Brach. . A Synopsis of American Fossil Brachiopoda, including Bibliography and Synonymy, by Charles Schuchert. 8vo, Washington, 1897. (United States Geological Survey, Bulletin No. 87.)

**Note regarding localities.**—The user of this Catalogue will find many discrepancies between the localities given here for the specimens and those given in the explanations of the plates in the Palæontology of New York, especially in volume 8 of that work. This has been unavoidable, because most of the specimens bear Prof. Hall's old locality tickets or labels, or show some other certain indication of the place from which they came, and it has seemed necessary to follow the evidence thus given by the specimens themselves. When there has been reasonable doubt in the matter, the specimen has been entered here as it stands in the published volume of the Palæontology.

Some of the localities from which Prof. Hall collected fossils in his early work, particularly that for the Fourth District Report, are no longer to be found in the gazetteer or on the map. For this reason it seems to be desirable to state where some of them were and to indicate the changes which have been made in the names of others:

Baileytown was on Seneca Lake near Lodi.

Bear's Gulf was in Schoharie County.

Dexterville is now known as East Jamestown.

Hobbieville was a hamlet in Allegany county, N. Y.

Jaycox's Run was near Geneseo, Livingston County.

Lapham's Mill was in Ontario county, N. Y.

New Buffalo, Iowa, is now called simply Buffalo.

Phillipsburg, N. Y., is now known as Belmont.

Pine Valley was in Catharine township, Schuyler county, N. Y.

Pratt's Falls are the same as Delphi Falls and are near Delphi, Onondaga county, N. Y.

"Rockville was a settlement near the mouth of Rock creek on the Genesee, in the township of Belfast, Allegany county, during the construction of the Genesee Valley Canal." Pal. N. Y., Vol. 5, pt. 1, p. vi.

Summit, N. Y. Prof. Hall's locality, was in Schoharie county.

Dr. Knapp's collection is now in the Borden Institute, Borden, Indiana.



CATALOGUE OF THE TYPES AND FIGURED SPECIMENS  
IN THE PALÆONTOLOGICAL COLLECTION OF  
THE GEOLOGICAL DEPARTMENT, AMERICAN  
MUSEUM OF NATURAL HISTORY.

*Part IV, Lower Carboniferous to Pleistocene, inclusive.*





| Subkingdom CRYPTOGRAMIA.   |                                                                                                                |
|----------------------------|----------------------------------------------------------------------------------------------------------------|
| LOCALITY.                  | REMARKS.                                                                                                       |
| Akron. Ohio.               | A small fragment, imbedded.                                                                                    |
| “ “                        | External imprint retaining a little carbonaceous substance.                                                    |
| PROTOZOA. Class RHIZOPODA. |                                                                                                                |
| .....                      | As <i>Rotalia Baileyi</i> .                                                                                    |
| Bloomington, Ind.          | A symmetrical individual. Twenty-nine other individuals from this locality are in the original type series.    |
| Spargen Hill, Ind.         | An unsymmetrical individual. Twenty-nine other individuals from this locality are in the original type series. |
| Alton, Ill.                | As <i>Rotalia Baileyi</i> . Thirty individuals which formed a part of the original type series.                |
| .....                      | See <i>Endothyra Baileyi</i> .                                                                                 |
| Class PLETHOSPONGIÆ.       |                                                                                                                |
| .....                      | As <i>Dictyophyton Newberryi</i> Hall?                                                                         |
| Richfield, Ohio.           | Cast.                                                                                                          |
| .....                      | As <i>Dictyophyton Redfieldi</i> .                                                                             |
| .....                      | “ “ “                                                                                                          |
| .....                      | “ <i>Phragmodictya? Redfieldi</i> . Reduced figure.                                                            |
| .....                      | “ <i>Dictyophyton? Redfieldi</i> .                                                                             |
| .....                      | Made the type of the new genus <i>Calathospongia</i> .                                                         |
| Harrisville, Ohio.         | Cast, practically entire.                                                                                      |
| Richfield, Ohio.           | Part of a cast.                                                                                                |
| .....                      | As <i>Dictyophyton sacculus</i> .                                                                              |
| .....                      | “ “ <i>Redfieldi?</i>                                                                                          |
| Richfield, Ohio.           | Cast.                                                                                                          |
| .....                      | This name has been abandoned, because the organisms to which it was applied are animals, not plants.           |
| .....                      | See <i>Phragmodictya catilliformis</i> .                                                                       |
| .....                      | “ <i>Dictyospongia cylindrica</i> .                                                                            |
| .....                      | “ <i>Thamnodictya Newberryi</i> and <i>Calathospongia carceralis</i> .                                         |
| .....                      | “ <i>Calathospongia Redfieldi</i> and <i>Calathospongia sacculus</i> .                                         |
| .....                      | “ “ <i>sacculus</i> .                                                                                          |
| .....                      | As <i>Dictyophyton cylindricum</i> .                                                                           |
| .....                      | “ “ “                                                                                                          |
| .....                      | Made type of new genus <i>Calathospongia</i> .                                                                 |
| Crawfordsville, Ind.       | Imbedded, pyritized fragment showing the spicules.                                                             |

Class PLETHOSPONGIÆ—Continued.

| Geol.<br>Subdiv. | Cat.<br>No. | Type or<br>Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                             | REFERENCE.    |             |         |       |       |
|------------------|-------------|-----------------------|------------------------------------------------------------------------|---------------|-------------|---------|-------|-------|
|                  |             |                       |                                                                        | Work.         | Vol.        | P.      | Pl.   | Figs. |
| Kind.            | 4986<br>1   | Type.                 | <b>Ectenodictya</b> Hall.<br><i>burlingtonensis</i> .....              | .....         | .....       | .....   | ..... | ..... |
|                  |             |                       | <b>Lyrodictya</b> Hall.<br>? <i>burlingtonensis</i> ..... <i>Hall.</i> | N. Y. S. M.   | 35          | 476     | ..... | ..... |
|                  |             |                       | <i>H. &amp; C.</i>                                                     | Pal. Sp.      | .....       | 165     | 53    | 6     |
|                  |             |                       | "                                                                      | N. Y. S. M.   | 50          | 357     | 53    | 6     |
|                  |             |                       | "                                                                      | St. G. N. Y.  | 16          | 357     | 53    | 6     |
| Keok.            | 4987<br>1   | Gen. and<br>Sp. Type. | <b>Phragmodictya</b> Hall.<br><i>catilliformis</i> ..... <i>Whitf.</i> | A. M. N. H.   | I           | 18      | 3     | ..... |
|                  |             |                       | <i>Hall.</i>                                                           | N. Y. S. M.   | 35          | 477     | 18    | 14    |
|                  |             |                       | <i>H. &amp; C.</i>                                                     | Pal. Sp.      | .....       | 173     | 64    | 5     |
|                  |             |                       | "                                                                      | N. Y. S. M.   | 50          | 365     | 64    | 5     |
|                  |             |                       | "                                                                      | St. G. N. Y.  | 16          | 365     | 64    | 5     |
|                  |             |                       | <i>Newberryi</i> .....                                                 | .....         | .....       | .....   | ..... | ..... |
|                  |             |                       | <i>Redfieldi</i> .....                                                 | .....         | .....       | .....   | ..... | ..... |
| Keok.            | 4988<br>1   | Gen. and<br>Sp. Type. | <b>Physospongia</b> Hall.<br><i>Dawsoni</i> .....                      | <i>Whitf.</i> | Am. J. Sci. | III, 22 | 132   | ..... |
|                  |             |                       | "                                                                      | "             | A. M. N. H. | I       | 16    | 4     |
| "                | 4989<br>1   | Type.                 | <i>multibursaria</i> ... <i>H. &amp; C.</i>                            | Pal. Sp.      | .....       | 196     | ..... | 45    |
|                  |             |                       | "                                                                      | N. Y. S. M.   | 50          | 388     | 61    | 7     |
|                  |             |                       | "                                                                      | "             | "           | "       | "     | "     |
|                  |             |                       | "                                                                      | St. G. N. Y.  | 16          | 388     | 61    | 45    |
| Wav.             | 4990<br>1   | Gen. and<br>Sp. Type. | <b>Thamnodictya</b> Hall.<br><i>Newberryi</i> ..... <i>Hall.</i>       | N. Y. S. M.   | 16          | 87      | 4     | 1, 4  |
|                  |             |                       | "                                                                      | N. F. D.      | .....       | .....   | 17    | 10    |
|                  |             |                       | "                                                                      | N. Y. S. M.   | 35          | 477     | 18    | 10    |
|                  |             |                       | <i>H. &amp; C.</i>                                                     | Pal. Sp.      | .....       | 161     | 50    | 1, 6  |
|                  |             |                       | "                                                                      | N. Y. S. M.   | 50          | 353     | 50    | 1, 6  |
|                  |             |                       | "                                                                      | St. G. N. Y.  | 16          | 353     | 50    | 1, 6  |
|                  |             |                       | "                                                                      | N. Y. S. M.   | 16          | 87      | 4     | 2     |
|                  |             |                       | "                                                                      | N. F. D.      | .....       | .....   | 17    | 11    |
|                  |             |                       | "                                                                      | N. Y. S. M.   | 35          | 477     | 18    | 11    |
|                  |             |                       | <i>H. &amp; C.</i>                                                     | Pal. Sp.      | .....       | 160     | 50    | 5     |
| "                | 4990<br>2   | "                     | "                                                                      | N. Y. S. M.   | 50          | 353     | 50    | 5     |
|                  |             |                       | "                                                                      | St. G. N. Y.  | 16          | 353     | 50    | 5     |
|                  |             |                       | "                                                                      | "             | "           | "       | "     | "     |
|                  |             |                       | "                                                                      | "             | "           | "       | "     | "     |
| "                | 4990<br>2   | "                     | "                                                                      | N. Y. S. M.   | 16          | 87      | 4     | 2     |
|                  |             |                       | "                                                                      | N. F. D.      | .....       | .....   | 17    | 11    |
| "                | 4990<br>2   | "                     | "                                                                      | N. Y. S. M.   | 35          | 477     | 18    | 11    |
|                  |             |                       | "                                                                      | Pal. Sp.      | .....       | 160     | 50    | 5     |
|                  |             |                       | "                                                                      | N. Y. S. M.   | 50          | 353     | 50    | 5     |
|                  |             |                       | "                                                                      | St. G. N. Y.  | 16          | 353     | 50    | 5     |
| "                | 4990<br>2   | "                     | <b>Uphantænia</b> Vanuxem.<br><i>Dawsoni</i> .....                     | .....         | .....       | .....   | ..... | ..... |
|                  |             |                       | "                                                                      | "             | "           | "       | "     | "     |

Subkingdom CŒLENTERATA.

|       |           |       |                                                                      |                |                  |     |       |       |
|-------|-----------|-------|----------------------------------------------------------------------|----------------|------------------|-----|-------|-------|
| Kind. | 4991<br>1 | Type. | <b>Favosites</b> Lamarck.<br><i>divergens</i> ( <i>W. &amp; W.</i> ) |                |                  |     |       |       |
|       |           |       | <i>A. Winchell.</i>                                                  | P. A. N. S.    | 17               | 112 |       |       |
|       |           |       | <i>W. &amp; W.</i>                                                   | B. S. N. H.    | 8                | 306 | ..... | ..... |
|       |           |       | <i>White.</i>                                                        | Wheeler Survey | Prelim.<br>Rept. | 15  | ..... | ..... |
| "     | "         | "     | "                                                                    | "              | "                | 4   | 79    | 5     |
|       |           |       | "                                                                    | "              | "                | 4   | 79    | 5     |



| LOCALITY.             | REMARKS.                                                                                                                                                                                                                                                                                   |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                 | See <i>Lyrodictya burlingtonensis</i> .                                                                                                                                                                                                                                                    |
| .....                 | As <i>Ectenodictya burlingtonensis</i> .                                                                                                                                                                                                                                                   |
| Burlington, Ia.       | Imperfect imprint in the dark yellow, mottled sandstone.                                                                                                                                                                                                                                   |
| .....                 | As <i>Dictyophyton catilliforme</i> .                                                                                                                                                                                                                                                      |
| .....                 | Given as the type of the genus <i>Phragmodictya</i> .                                                                                                                                                                                                                                      |
| Crawfordsville, Ind.  | A very large, compressed example, imbedded.                                                                                                                                                                                                                                                |
| .....                 | See <i>Thamnodictya Newberryi</i> .                                                                                                                                                                                                                                                        |
| .....                 | “ <i>Calathospongia Redfieldi</i> .                                                                                                                                                                                                                                                        |
| .....                 | As <i>Uphantænia Dawsoni</i> .                                                                                                                                                                                                                                                             |
| Crawfordsville, Ind.  | “ “ “ The specimen described and its counterpart. The generic name <i>Physospongia</i> was first used by Hall in N. F. D., expl. pl. 19, and was first described in the 35th Rept. N. Y. S. M., pp. 467 and 469, with this species as the type, but this specimen was not figured by Hall. |
| “ “                   | Large fragment, imbedded.                                                                                                                                                                                                                                                                  |
| .....                 | As <i>Dictophyton Newberryi</i> .                                                                                                                                                                                                                                                          |
| .....                 | “ <i>Phragmodictya Newberryi</i> .                                                                                                                                                                                                                                                         |
| .....                 | New genus <i>Thamnodictya</i> described on p. 466 of same report.                                                                                                                                                                                                                          |
| Richfield, Ohio.      | A well preserved internal cast and its external imprint.                                                                                                                                                                                                                                   |
| .....                 | As <i>Dictyophyton Newberryi</i> .                                                                                                                                                                                                                                                         |
| .....                 | “ <i>Phragmodictya Newberryi</i> .                                                                                                                                                                                                                                                         |
| Cuyahoga Falls, Ohio. | Internal cast. The counterpart (external imprint) of the specimen illustrated by fig. 2, pl. 50, Pal. Sp., is present.                                                                                                                                                                     |
| .....                 | See <i>Physospongia Dawsoni</i> .                                                                                                                                                                                                                                                          |

Class ACTINOZOA.

|                 |                                                                                                                                                                                                                                                                                 |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....           | As <i>Favosites</i> —.                                                                                                                                                                                                                                                          |
| .....           | As type of <i>Favosites Whitfieldi</i> White. This reference to White's “ Preliminary report upon the invertebrate fossils collected by the expeditions of 1871, 1872 and 1873, with descriptions from species,” has been taken from vol. 4 of final report as next cited here. |
| Burlington, Ia. | A small, weatherworn mass.                                                                                                                                                                                                                                                      |

Class ACTINOZOA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No. | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.              | REFERENCE.  |             |     |      |       |
|------------------|-------------|----------------------|-----------------------------------------|-------------|-------------|-----|------|-------|
|                  |             |                      |                                         | Work.       | Vol.        | P.  | Pl.  | Figs. |
| St. L.           | 4992<br>1   | Type.                | <b>Favosites</b> Lamarck.— <i>Cont.</i> |             |             |     |      |       |
|                  |             |                      | <i>Whitfieldi</i> .....                 |             |             |     |      |       |
|                  |             |                      | <i>sp.</i> .....                        | B. S. N. H. | 8           | 306 | ...  | ...   |
|                  |             |                      | <b>Lithostrotion</b> Llhwyd.            |             |             |     |      |       |
|                  |             |                      | <i>proliferum</i> .....Hall.            | Geol. Ia.   | I, pt. 2    | 668 | 24   | 6a, b |
| "                | "           | "                    | " .....                                 | " "         | I, pt. 2    | 668 | 24   | 6c    |
| Kind.            | 4993<br>1   | "                    | <b>Lophophyllum</b> E. & H.             |             |             |     |      |       |
|                  |             |                      | <i>calceola</i> .....                   | W. & W.     | B. S. N. H. | 8   | 305  | ....  |
| "                | 4994<br>1   | "                    | <b>Zaphrentis</b> Rafinesque.           |             |             |     |      |       |
|                  |             |                      | <i>acuta</i> .....W. & W.               | " "         | 8           | 306 | .... | ....  |

Class CRINOIDEA.

|       |           |        |                                            |             |    |     |   |       |
|-------|-----------|--------|--------------------------------------------|-------------|----|-----|---|-------|
| Burl. | 4995<br>1 | Fig'd. | <b>Actinocrinus</b> Miller.                |             |    |     |   |       |
|       |           |        | <i>ægilops</i> .....                       |             |    |     |   |       |
|       |           |        | <i>clarus</i> .....                        |             |    |     |   |       |
|       |           |        | <i>clypeatus</i> .....                     |             |    |     |   |       |
|       |           |        | <i>discoideus</i> .....                    |             |    |     |   |       |
|       |           |        | <i>divergens</i> .....                     |             |    |     |   |       |
|       |           |        | <i>equibrachiatus</i> , var. <i>alatus</i> |             |    |     |   |       |
|       |           |        | <i>glans</i> .....                         |             |    |     |   |       |
|       |           |        | <i>inflatus</i> .....                      |             |    |     |   |       |
|       |           |        | <i>inornatus</i> .....                     |             |    |     |   |       |
|       |           |        | <i>Laura</i> ..                            |             |    |     |   |       |
|       |           |        | <i>lepidus</i> .....                       |             |    |     |   |       |
|       |           |        | <i>limabrachiatus</i> .....                |             |    |     |   |       |
|       |           |        | <i>matuta</i> , var. <i>attenuatus</i> ..  |             |    |     |   |       |
|       |           |        | <i>oblatus</i> .....                       |             |    |     |   |       |
|       |           |        | <i>olliculus</i> .....                     |             |    |     |   |       |
|       |           |        | <i>opusculus</i> .....                     |             |    |     |   |       |
|       |           |        | <i>papillatus</i> .....                    |             |    |     |   |       |
|       |           |        | <i>pendens</i> .....                       |             |    |     |   |       |
|       |           |        | <i>pentagonus</i> .....                    |             |    |     |   |       |
|       |           |        | <i>proboscidualis</i> .....                |             |    |     |   |       |
|       |           |        | <i>pyramidatus</i> .....                   |             |    |     |   |       |
|       |           |        | <i>quaternarius</i> .....                  |             |    |     |   |       |
|       |           |        | <i>rusticus</i> .....                      |             |    |     |   |       |
|       |           |        | <i>scitulus</i> (M. & W.) Hall.            | Ia. Crin.   |    | 2   |   |       |
|       |           |        | "                                          | D. N. S. C. |    | 267 |   |       |
|       |           |        | Whitf.                                     | Mem. A. M.  | I  | 10  | I | 13    |
| Keok. | 4996<br>1 | Type.  | <i>semimultiramosus</i> . Whitf.           | A. M. N. H. | 13 | 23  | 3 | ....  |
|       |           |        | <i>thetis</i> .....                        |             |    |     |   |       |
|       |           |        | <i>tricornis</i> .....                     |             |    |     |   |       |
|       |           |        | <i>turbinatus</i> .....                    |             |    |     |   |       |
|       |           |        | " var. <i>elegans</i> ...                  |             |    |     |   |       |
|       |           |        | <i>unicornis</i> .....                     |             |    |     |   |       |
| Burl. | 4997<br>1 | Type.  | <b>Agaricocrinus</b> Troost.               |             |    |     |   |       |
|       |           |        | <i>bellatrema</i> .....                    |             |    |     |   |       |
|       |           |        | <i>excavatus</i> .....Hall.                | Ia. Crin.   |    | 3   |   |       |
|       |           |        | "                                          | D. N. S. C. |    | 282 |   |       |
|       |           |        | Whitf.                                     | Mem. A. M.  | I  | 26  | 2 | 14-16 |



| LOCALITY.               | REMARKS.                                                                           |
|-------------------------|------------------------------------------------------------------------------------|
| .....                   | See <i>Favosites divergens</i> .                                                   |
| .....                   | “ “ “                                                                              |
| Johnson's Landing, Ill. | A small, branching colony, imbedded ; and one which has been cut longitudinally.   |
| “ “                     | A fragment which shows a solid axis, contrary to the representation of the figure. |
| Burlington, Ia.         | The two small calyces which were indicated as the types.                           |
| “ “                     | A small, nearly perfect calyx.                                                     |
| .....                   | See <i>Teleiocrinus ægilops</i> .                                                  |
| .....                   | “ <i>Cactocrinus clarus</i> .                                                      |
| .....                   | “ <i>Batocrinus clypeatus</i> .                                                    |
| .....                   | “ “ <i>discoideus</i> .                                                            |
| .....                   | “ <i>Amphoracrinus divergens</i> .                                                 |
| .....                   | “ <i>Batocrinus æquibrachiatus</i> , var. <i>alatus</i> .                          |
| .....                   | “ <i>Cactocrinus glans</i> .                                                       |
| .....                   | “ <i>Amphoracrinus inflatus</i> .                                                  |
| .....                   | “ <i>Batocrinus inornatus</i> .                                                    |
| .....                   | “ “ <i>Laura</i> .                                                                 |
| .....                   | “ “ <i>lepidus</i> .                                                               |
| .....                   | “ <i>Cactocrinus limibrachiatus</i> .                                              |
| .....                   | “ <i>Eretmocrinus attenuatus</i> .                                                 |
| .....                   | “ <i>Batocrinus oblatas</i> .                                                      |
| .....                   | “ <i>Periechocrinus Whitei</i> .                                                   |
| .....                   | “ <i>Cactocrinus opusculus</i> .                                                   |
| .....                   | “ <i>Batocrinus papillatus</i> .                                                   |
| .....                   | “ <i>Dorycrinus pendens</i> .                                                      |
| .....                   | “ <i>Stegānocrinus pentagonus</i> .                                                |
| .....                   | “ <i>Cactocrinus proboscidualis</i> .                                              |
| .....                   | “ <i>Agaricocrinus pyramidatus</i> .                                               |
| .....                   | “ <i>Cactocrinus proboscidualis</i> .                                              |
| .....                   | “ <i>Actinocrinus scitulus</i> .                                                   |
| .....                   | As type of <i>Actinocrinus rusticus</i> Hall.                                      |
| .....                   | “ “ “ “ “ “                                                                        |
| Burlington, Ia.         | “ “ “ “ “ “ Three calyces are marked as being Hall's types.                        |
| Near Salem, Ind.        | Two weathered individuals imbedded in the same block.                              |
| .....                   | See <i>Cactocrinus thetis</i> .                                                    |
| .....                   | “ <i>Dorycrinus tricornis</i> .                                                    |
| .....                   | “ <i>Batocrinus turbinatus</i> .                                                   |
| .....                   | “ “ “ var. <i>elegans</i> .                                                        |
| .....                   | “ <i>Dorycrinus unicornis</i> .                                                    |
| .....                   | “ <i>Pereiocrinus Whitei</i> .                                                     |
| .....                   | See <i>Agaricocrinus ornotrema</i> .                                               |
| .....                   | As “ ( <i>Amphoracrinus</i> ) <i>excavatus</i> .                                   |
| Burlington, Ia.         | A calyx.                                                                           |

## Class CRINOIDEA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.        | REFERENCE.  |          |     |       |        |
|------------------|------------------|----------------------|-----------------------------------|-------------|----------|-----|-------|--------|
|                  |                  |                      |                                   | Work.       | Vol.     | P.  | Pl.   | Figs.  |
| Burl.            | <u>4998</u><br>1 | Type.                | <b>Agaricocrinus</b> Troost-Con.  |             |          |     |       |        |
|                  |                  |                      | ornotrema . . . . . Hall.         | Ia. Crin.   | .....    | 3   |       |        |
|                  |                  |                      | “                                 | D. N. S. C. | .....    | 281 | ..... | .....  |
|                  |                  |                      | Whitf.                            | Mem. A. M.  | I        | 24  | 2     | 19-22  |
| “                | <u>4999</u><br>1 | “                    | pentagonus . . . . . Hall.        | Ia. Sup.    | .....    | 57  |       |        |
|                  |                  |                      | Whitf.                            | Mem. A. M.  | I        | 25  | 2     | 17, 18 |
| “                | <u>5000</u><br>1 | “                    | pyramidatus . . . . . Hall.       | Geol. Ia.   | 1, pt 2  | 565 | ..... | .....  |
|                  |                  |                      | Whitf.                            | Mem. A. M.  | I        | 23  | 2     | 23-25  |
| “                | <u>5001</u><br>1 | “                    | <b>Amphoracrinus</b> Austin.      |             |          |     |       |        |
|                  |                  |                      | divergens . . . . . Hall.         | Ia. Sup.    | .....    | 36  | ..... | .....  |
|                  |                  |                      | Whitf.                            | Mem. A. M.  | I        | 21  | 2     | 12, 13 |
| “                | <u>5002</u><br>1 | “                    | inflatus . . . . . Hall.          | Ia. Sup.    | .....    | 20  | ..... | .....  |
|                  |                  |                      | Whitf.                            | Mem. A. M.  | I        | 22  | 2     | 10, 11 |
| “                | <u>5003</u><br>1 | “                    | <b>Batocrinus</b> Casseday.       |             |          |     |       |        |
|                  |                  |                      | æquibrachiatus <i>McChesney</i> , |             |          |     |       |        |
|                  |                  |                      | var. alatus . . . . . Hall.       | Ia. Crin.   | .....    | I   | ..... | .....  |
|                  |                  |                      | “                                 | D. N. S. C. | .....    | 263 | ..... | .....  |
|                  |                  |                      | Whitf.                            | Mem. A. M.  | I        | 11  | I     | 14     |
| “                | <u>5004</u><br>1 | “                    | bisbrachiatus . . . . . Whitf.    | Mem. A. M.  | I        | 13  | 2     | 4, 5   |
| “                | <u>5005</u><br>1 | “                    | clypeatus . . . . . Hall.         | Ia. Sup.    | .....    | 12  | ..... | .....  |
| “                | <u>5006</u><br>1 | “                    | discoideus . . . . . Hall.        | Geol. Ia.   | 1, pt. 2 | 594 | ..... | .....  |
|                  |                  |                      | Whitf.                            | Mem. A. M.  | I        | 14  | I     | 19, 20 |
| “                | <u>5007</u><br>1 | “                    | inornatus . . . . . Hall.         | Ia. Sup.    | .....    | 24  | ..... | .....  |
|                  |                  |                      | Whitf.                            | Mem. A. M.  | I        | 15  | 2     | 1-3    |
| “                | <u>5008</u><br>1 | “                    | Laura . . . . . Hall.             | Ia. Crin.   | .....    | 15  | ..... | .....  |
|                  |                  |                      | Whitf.                            | Mem. A. M.  | I        | 17  | I     | 15, 16 |
| “                | <u>5009</u><br>1 | “                    | lepidus . . . . . Hall.           | Ia. Sup.    | .....    | 32  | ..... | .....  |
|                  |                  |                      | Whitf.                            | Mem. A. M.  | I        | 16  | I     | 17, 18 |
| “                | <u>5010</u><br>1 | “                    | oblatus . . . . . Hall.           | Ia. Sup.    | .....    | 38  | ..... | .....  |
|                  |                  |                      | Whitf.                            | Mem. A. M.  | I        | 12  | I     | 21, 22 |
| “                | <u>5011</u><br>1 | “                    | papillatus . . . . . Hall.        | Ia. Sup.    | .....    | 29  | ..... | .....  |
| “                | <u>5012</u><br>1 | “                    | turbinatus . . . . . Hall.        | Geol. Ia.   | 1, pt. 2 | 587 | ..... | .....  |
| “                | <u>5013</u><br>1 | “                    | “ var. elegans, “                 | “ “         | 1, pt. 2 | 588 | ..... | 87     |
| “                | <u>5014</u><br>1 | “                    | <b>Cactocrinus</b> W. & S.        |             |          |     |       |        |
|                  |                  |                      | clarus . . . . . Hall.            | Ia. Crin.   | .....    | 2   | ..... | .....  |
|                  |                  |                      | “                                 | D. N. S. C. | .....    | 277 | 3     | 25     |
|                  |                  |                      | Whitf.                            | Mem. A. M.  | I        | 8   | I     | 4, 5   |
| “                | <u>5015</u><br>1 | “                    | glans . . . . . Hall.             | Ia. Sup.    | .....    | 16  | ..... | .....  |
|                  |                  |                      | Whitf.                            | Mem. A. M.  | I        | 10  | I     | 11, 12 |



| LOCALITY.       | REMARKS.                                                                                                                                                                                                                                                                                                  |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Burlington, Ia. | As <i>Agaricocrinus</i> ( <i>Amphoracrinus</i> ) <i>bellatrema</i> Hall, without any statement, however, that the name was to take the place of <i>Agaricocrinus ornotrema</i> .<br>Two imperfect, weathered calyces. <i>Agaricocrinus bellatrema</i> Hall is the name used by W. & S., N. A. C., p. 506. |
| " "             | A free calyx and an imbedded one. This species is regarded by W. & S. as synonymous with <i>Agaricocrinus bullatus</i> Hall. Vid. N. A. C., p. 493.                                                                                                                                                       |
| Burlington, Ia. | As <i>Actinocrinus pyramidatus</i> .<br>Two entire calyces.                                                                                                                                                                                                                                               |
| Burlington, Ia. | As <i>Actinocrinus divergens</i> .<br>A macerated crown with displaced plates, imbedded, and a separated dorsal cup.                                                                                                                                                                                      |
| Burlington, Ia. | As <i>Actinocrinus inflatus</i> .<br>A slightly crushed calyx. Regarded by W. & S. as a synonym of <i>Amphoracrinus spinobrachiatus</i> Hall. Vid. N. A. C., p. 591.                                                                                                                                      |
| Burlington, Ia. | As <i>Actinocrinus equibrachiatus</i> , var. <i>alatus</i> .<br>" " " " "<br>A calyx which has been somewhat flattened vertically. Referred to <i>Lobocrinus æquibrachiatus</i> , var. <i>asteriscus</i> M. & W. by W. & S., N. A. C., p. 441.                                                            |
| " "             | Half of a crown with stomach plate in place. Referred to <i>Eutrochocrinus Christyi</i> Shumard by W. & S., N. A. C., p. 409.                                                                                                                                                                             |
| " "             | As <i>Actinocrinus clypeatus</i> . A calyx, somewhat compressed vertically. One of the original series, but not figured.                                                                                                                                                                                  |
| Burlington, Ia. | As <i>Actinocrinus discoideus</i> .<br>A calyx. A second, more elongated calyx is also marked as a type. W. & S. use the name <i>Batocrinus subæqualis</i> McChesney for this species, N. A. C., p. 369.                                                                                                  |
| Burlington, Ia. | As <i>Actinocrinus inornatus</i> .<br>A calyx of medium size. W. & S., N. A. C., p. 380, make this a synonym of <i>Batocrinus clypeatus</i> Hall.                                                                                                                                                         |
| Burlington, Ia. | As <i>Actinocrinus Laura</i> .<br>A calyx.                                                                                                                                                                                                                                                                |
| Burlington, Ia. | As <i>Actinocrinus lepidus</i> .<br>A calyx.                                                                                                                                                                                                                                                              |
| Rocheford, Mo.  | As <i>Actinocrinus oblatus</i> .<br>A somewhat distorted calyx. A more rotund specimen is marked as another type. It is <i>Dizygocrinus rotundus</i> , according to W. & S., N. A. C., p. 432.                                                                                                            |
| Burlington, Ia. | As <i>Actocrinus papillatus</i> . A partly imbedded calyx. One of the original series, but not figured.                                                                                                                                                                                                   |
| " "             | As <i>Actinocrinus turbinatus</i> . A calyx of the original series which was not figured.                                                                                                                                                                                                                 |
| " "             | As <i>Actinocrinus turbinatus</i> , var. <i>elegans</i> . Calyx and part of proboscis. The specimen from which the diagram was made.                                                                                                                                                                      |
| Burlington, Ia. | <i>Actinocrinus clarus</i> .<br>" "<br>A nearly normal dorsal cup and one that has been flattened.                                                                                                                                                                                                        |
| Burlington, Ia. | As <i>Actinocrinus glans</i> .<br>A calyx which was used in the original description.                                                                                                                                                                                                                     |

## Class CRINOIDEA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                                   | REFERENCE.                             |                     |                |                     |                         |
|------------------|------------------|-----------------------|------------------------------------------------------------------------------|----------------------------------------|---------------------|----------------|---------------------|-------------------------|
|                  |                  |                       |                                                                              | Work.                                  | Vol.                | P.             | Pl.                 | Figs.                   |
| Burl.            | $\frac{5016}{1}$ | Type.                 | <b>Cactocrinus</b> W. & S.— <i>Cont.</i><br>limibrachiatus..... <i>Hall.</i> | Ia. Crin.                              | .....               | 2              | .....               | .....                   |
|                  |                  |                       | “<br>“<br><i>Whitf.</i>                                                      | D. N. S. C.<br>Mem. A. M.              | .....<br>I          | 268<br>5       | .....<br>I          | .....<br>8, 9           |
| “                | $\frac{5017}{1}$ | “                     | opusculus..... <i>Hall.</i>                                                  | Ia. Sup.                               | .....               | .....          | 2                   | 6                       |
|                  |                  |                       | “<br>“<br><i>Whitf.</i>                                                      | D. N. S. C.<br>Mem. A. M.              | .....<br>I          | 264<br>9       | .....<br>I          | .....<br>6, 7           |
| “                | $\frac{5018}{1}$ | Gen. and<br>Sp. Type. | proboscidalis..... <i>Hall.</i>                                              | Geol. Ia.                              | I, pt. 2            | 584            | 10                  | 13                      |
| “                | “                | Fig'd.                | “<br>“<br><i>Whitf.</i>                                                      | Ia. Sup.<br>Mem. A. M.                 | .....<br>I          | 22<br>7        | .....<br>I          | .....<br>1-3            |
| “                | $\frac{5019}{1}$ | Type.                 | thetis..... <i>Hall.</i>                                                     | Ia. Crin.                              | .....               | 11             | .....               | .....                   |
|                  |                  |                       | “<br>“<br><i>Whitf.</i>                                                      | Mem. A. M.                             | I                   | 6              | I                   | 10                      |
| “                | $\frac{5020}{1}$ | “                     | <b>Cœliocrinus</b> White.<br>dilatatus..... <i>Hall.</i>                     | Ia. Crin.                              | .....               | 6              | .....               | .....                   |
|                  |                  |                       | “<br>“<br><i>Whitf.</i>                                                      | D. N. S. C.<br>Mem. A. M.              | .....<br>I          | 300<br>33      | .....<br>3          | .....<br>18             |
|                  |                  |                       | <b>Cyathocrinus</b> Miller.<br><i>Lyoni</i> .....                            | .....                                  | .....               | .....          | .....               | .....                   |
| Keok.            | $\frac{5021}{1}$ | Fig'd.                | multibrachiatus<br>(L. & C.) <i>Hall.</i>                                    | D. N. S. C.                            | .....               | .....          | 5                   | 4-6                     |
| Burl.            | $\frac{5022}{1}$ | Type.                 | sculptilis..... <i>Hall.</i>                                                 | Ia. Sup.                               | .....               | 59             | .....               | .....                   |
|                  |                  |                       | “<br>“<br><i>Whitf.</i>                                                      | Mem. A. M.                             | I                   | 29             | 3                   | 10-12                   |
| “                | $\frac{5023}{1}$ | “                     | viminalis..... <i>Hall.</i>                                                  | Ia. Crin.                              | .....               | 5              | .....               | .....                   |
|                  |                  |                       | “<br>“<br><i>Whitf.</i>                                                      | D. N. S. C.<br>Mem. A. M.              | .....<br>I          | 299<br>28      | .....<br>3          | .....<br>7              |
| “                | $\frac{5024}{1}$ | “                     | <b>Dorycrinus</b> F. Roemer.<br>pendens..... <i>Hall.</i>                    | Ia. Sup.                               | .....               | 31             | .....               | .....                   |
|                  |                  |                       | “<br>“<br><i>Whitf.</i>                                                      | Mem. A. M.                             | I                   | 18             | 2                   | 9                       |
| “                | $\frac{5025}{1}$ | “                     | tricornis..... <i>Hall.</i>                                                  | Geol. Ia.                              | I, pt. 2            | 569            | .....               | .....                   |
|                  |                  |                       | “<br>“<br><i>Whitf.</i>                                                      | Mem. A. M.                             | I                   | 19             | 2                   | 6-8                     |
| “                | $\frac{5026}{1}$ | Fig'd.                | unicornis ( <i>Ow. &amp; Sh.</i> ) <i>H.</i>                                 | Geol. Ia.                              | I, pt. 2            | 568            | 10                  | 5a-c                    |
| “                | $\frac{5027}{1}$ | Type.                 | <b>Eretmocrinus</b> L. & C.<br>attenuatus..... <i>Hall.</i>                  | Ia. Crin.                              | .....               | 14             | .....               | .....                   |
|                  |                  |                       | “<br>“<br><i>Whitf.</i>                                                      | Mem. A. M.                             | I                   | 18             | I                   | 23, 24                  |
| Keok.            | $\frac{5028}{1}$ | “                     | <b>Eupachycrinus</b> M. & W.<br>orbicularis..... <i>Hall.</i>                | Ia. Crin.                              | .....               | 7              | .....               | .....                   |
|                  |                  |                       | “<br>“<br><i>Whitf.</i>                                                      | D. N. S. C.<br>Mem. A. M.              | .....<br>I          | 311<br>30      | .....<br>3          | .....<br>8, 9           |
|                  |                  |                       | <b>Forbesiocrinus</b> de K. & le<br><i>Giddingei</i> .....                   | Hon.                                   | .....               | .....          | .....               | .....                   |
|                  |                  |                       | <i>juvenis</i> .....                                                         | .....                                  | .....               | .....          | .....               | .....                   |
| Burl.            | $\frac{5029}{1}$ | Type.                 | <b>Gilbertsocrinus</b> Phillips.<br>papillatus..... <i>Hall.</i>             | Ia. Sup.                               | .....               | 76             | .....               | .....                   |
|                  |                  |                       | “<br>“<br><i>Whitf.</i>                                                      | Mem. A. M.                             | I                   | 36             | 3                   | 23                      |
| “                | $\frac{5030}{1}$ | “                     | <b>Graphiocrinus</b> de K. & le<br>tortuosus..... <i>Hall.</i>               | Hon.                                   | .....               | .....          | .....               | .....                   |
|                  |                  |                       | “<br>“<br><i>Whitf.</i>                                                      | Ia. Crin.<br>D. N. S. C.<br>Mem. A. M. | .....<br>.....<br>I | 7<br>309<br>32 | .....<br>.....<br>3 | .....<br>.....<br>15-17 |



| LOCALITY.            | REMARKS.                                                                                                                                                                                   |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                | As <i>Actinocrinus limabrachiatus</i> .                                                                                                                                                    |
| .....                | " " "                                                                                                                                                                                      |
| Burlington, Ia.      | " " " A set of arms used in the original description.                                                                                                                                      |
| .....                | As <i>Actinocrinus opusculus</i> . Described in explanation of plate.                                                                                                                      |
| .....                | " " "                                                                                                                                                                                      |
| Burlington, Ia.      | " " " A dorsal cup.                                                                                                                                                                        |
| " "                  | " " <i>proboscidualis</i> Hall. A calyx.                                                                                                                                                   |
| .....                | " type of <i>Actinocrinus quaternarius</i> Hall.                                                                                                                                           |
| Burlington, Ia.      | " <i>Actinocrinus quaternarius</i> Hall. A dorsal cup and a crushed crown. Referred here by W. & S., N. A. C., p. 601.                                                                     |
| .....                | As <i>Actinocrinus thetis</i> .                                                                                                                                                            |
| Burlington, Ia.      | A crown, somewhat imperfect on one side.                                                                                                                                                   |
| .....                | As <i>Poteriocrinus dilatatus</i> .                                                                                                                                                        |
| .....                | " " "                                                                                                                                                                                      |
| Burlington, Ia.      | A calyx and its proboscis.                                                                                                                                                                 |
| .....                | See <i>Vasocrinus Lyoni</i> .                                                                                                                                                              |
| Crawfordsville, Ind. | An imbedded crown with a small fragment of stem, a calyx and a dorsal cup retaining fragment of stem.                                                                                      |
| Burlington, Ia.      | A dorsal cup.                                                                                                                                                                              |
| " "                  | Crown with part of stem attached, imbedded. Possibly a synonym of <i>Cyathocrinus iowensis</i> Ow. & Sh., as stated by Wachsmuth and Springer, Revision Palæocr., pt. I, p. 86.            |
| .....                | As <i>Actinocrinus pendens</i> .                                                                                                                                                           |
| Burlington, Ia.      | A dorsal cup retaining on one side a few of the dome plates. Probably = <i>Dorycrinus unicornis</i> Ow. & Sh.                                                                              |
| .....                | As <i>Actinocrinus tricornis</i> .                                                                                                                                                         |
| Burlington, Ia.      | Two calyces. Probably = <i>Dorycrinus unicornis</i> Ow. & Sh., as stated by W. & S., N. A. C., p. 468.                                                                                     |
| " "                  | As <i>Actinocrinus unicornis</i> Ow. & Sh. A calyx.                                                                                                                                        |
| .....                | " " <i>matuta</i> , var. <i>attenuatus</i> .                                                                                                                                               |
| Burlington, Ia.      | A much weathered calyx.                                                                                                                                                                    |
| .....                | As <i>Scaphiocrinus orbicularis</i> .                                                                                                                                                      |
| .....                | " " "                                                                                                                                                                                      |
| Keokuk, Ia.          | A dorsal cup.                                                                                                                                                                              |
| .....                | See <i>Taxocrinus Giddingei</i> .                                                                                                                                                          |
| .....                | " " <i>juvenis</i> .                                                                                                                                                                       |
| .....                | As <i>Trematocrinus papillatus</i> .                                                                                                                                                       |
| Burlington, Ia.      | " <i>Ollacrinus</i> " Part of a dorsal cup, imbedded. Referred to <i>Gilbertsocrinus typus</i> by W. & S., N. A. C., p. 242, but it is more like <i>G. robustus</i> than <i>G. typus</i> . |
| .....                | As <i>Scaphiocrinus tortuosus</i> .                                                                                                                                                        |
| .....                | " " "                                                                                                                                                                                      |
| Burlington, Ia.      | A crown, imbedded.                                                                                                                                                                         |

Class CRINOIDEA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                | REFERENCE.                             |                     |                |                     |                      |
|------------------|------------------|----------------------|---------------------------------------------------------------------------|----------------------------------------|---------------------|----------------|---------------------|----------------------|
|                  |                  |                      |                                                                           | Work.                                  | Vol.                | P.             | Pl.                 | Figs.                |
| Burl.            | $\frac{5031}{1}$ | Type.                | <b>Ichthyocrinus</b> Conrad.<br>burlingtonensis.....Hall.<br>Whitf.       | Geol. Ia.<br>Mem. A. M.                | I, pt. 2<br>I       | 557<br>35      | 3                   | 24                   |
|                  |                  |                      | <b>Ollacrinus</b> Cumberland.<br>papillatus .....                         | .....                                  | .....               | .....          | .....               | .....                |
| Burl.            | $\frac{5032}{1}$ | Type.                | <b>Periechocrinus</b> Austin.<br>Whitei.....Hall.<br>".....<br>Whitf.     | D. N. S. C.<br>Ia. Crin.<br>Mem. A. M. | .....<br>.....<br>I | 271<br>2<br>27 | .....<br>.....<br>2 | .....<br>.....<br>29 |
| Keok.            | $\frac{5033}{1}$ | "                    | <b>Platycrinus</b> Miller.<br>brevinodus .....                            | Ia. Crin.<br>D. N. S. C.               | .....<br>.....      | 4<br>286       | 2                   | 5                    |
| Burl.            | $\frac{5034}{1}$ | "                    | cavus.....Hall.                                                           | Geol. Ia.                              | I, pt. 2            | 527            | 8                   | Ia, b                |
| "                | $\frac{5035}{1}$ | "                    | clytis .....                                                              | Ia. Crin.<br>D. N. S. C.               | .....<br>.....      | 4<br>285       | 2                   | 4                    |
|                  |                  |                      | Whitf.                                                                    | Mem. A. M.                             | I                   | 2              | 3                   | 6                    |
| "                | $\frac{5036}{1}$ | "                    | elegans.....Hall.<br>".....<br>Whitf.                                     | Ia. Crin.<br>D. N. S. C.<br>Mem. A. M. | .....<br>.....<br>I | 4<br>285<br>3  | 2<br>3              | 15<br>I              |
| "                | $\frac{5037}{1}$ | "                    | excavatus .....                                                           | Ia. Crin.<br>D. N. S. C.               | .....<br>.....      | 4<br>286       | 2                   | I                    |
| "                | $\frac{5038}{1}$ | "                    | Whitf.<br>striobrachiatus .....                                           | Mem. A. M.<br>Ia. Crin.                | I<br>.....          | 3<br>4         | 3                   | 5                    |
|                  |                  |                      | ".....                                                                    | D. N. S. C.                            | .....               | 287            | 2                   | 2                    |
|                  |                  |                      | Whitf.                                                                    | Mem. A. M.                             | I                   | 4              | 3                   | 2-4                  |
| "                | $\frac{5039}{1}$ | "                    | subspinosus.....Hall.                                                     | Geol. Ia.                              | I, pt. 2            | 536            | 8                   | 9, 10                |
|                  |                  |                      | <b>Poteriocrinus</b> Miller.<br>carinatus .....                           | .....                                  | .....               | .....          | .....               | .....                |
| Burl.            | $\frac{5040}{1}$ | Type.                | dilatatus.....<br>Jesupi .....                                            | Whitf.<br>A. M. N. H.                  | .....<br>I          | 7              | I, 2                | .....                |
| St. L.           | $\frac{5041}{1}$ | Fig'd.               | missouriensis (Shum.) H.                                                  | Geol. Ia.                              | I, pt. 2            | 669            | 17                  | 7a, b                |
| Burl.            | $\frac{5042}{1}$ | Type.                | <b>Scaphiocrinus</b> Hall.....<br>carinatus.....Hall.<br>".....<br>Whitf. | Ia. Crin.<br>D. N. S. C.<br>Mem. A. M. | .....<br>.....<br>I | 8<br>310<br>31 | 3                   | 13, 14               |
|                  |                  |                      | orbicularis .....                                                         | .....                                  | .....               | .....          | .....               | .....                |
|                  |                  |                      | tortuosus .....                                                           | .....                                  | .....               | .....          | .....               | .....                |
| Burl.            | $\frac{5043}{1}$ | Type.                | <b>Steganocrinus</b> M. & W.<br>pentagonus .....                          | Geol. Ia.<br>Mem. A. M.                | I, pt. 2<br>I       | 577<br>.....   | 2                   | 26                   |
| Keok.            | $\frac{5044}{1}$ | "                    | <b>Taxocrinus</b> Phillips.<br>Giddingei.....Hall.                        | Geol. Ia.                              | I, pt. 2            | 633            | 17                  | 2, 4                 |
| Burl.            | $\frac{5045}{1}$ | "                    | juvenis.....Hall.<br>Whitf.                                               | D. N. S. C.<br>Mem. A. M.              | .....<br>I          | 319<br>35      | 3                   | 21, 22               |



| LOCALITY.       | REMARKS.                                                                                                                                                                                           |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Burlington, Ia. | Part of a dorsal cup, imbedded.                                                                                                                                                                    |
| .....           | See <i>Gilbertsocrinus papillatus</i> .                                                                                                                                                            |
| .....           | As <i>Actinocrinus</i> ( <i>Megistocrinus</i> ) <i>Whitei</i> .                                                                                                                                    |
| .....           | " " " <i>olliculus</i> . Name abandoned by Hall.                                                                                                                                                   |
| Burlington, Ia. | Part of the crushed crown and stem of an individual, imbedded.                                                                                                                                     |
| Keokuk, Ia.     | A crown with the arms flattened and somewhat disintegrated.                                                                                                                                        |
| Burlington, Ia. | Dorsal cup, imbedded.                                                                                                                                                                              |
| " "             | A small, somewhat crushed crown with part of stem attached, imbedded. Wachsmuth and Springer consider this name a synonym of <i>Platycrinus scobina</i> M. & W. See N. A. C., p. 695.              |
| " "             | Crown and part of stem of a small individual, embedded. Regarded by Wachsmuth and Springer as a young <i>Platycrinus planus</i> Ow. & Sh., vid. N. A. C., p. 669.                                  |
| " "             | Dorsal cup, imbedded.                                                                                                                                                                              |
| " "             | A crushed crown with some of the arms missing. Referred to <i>Platycrinus discoideus</i> Ow. & Sh. by W. & Sp., N. A. C., p. 713.                                                                  |
| " "             | Two calyces, imbedded.                                                                                                                                                                             |
| .....           | See <i>Scaphiocrinus carinatus</i> .                                                                                                                                                               |
| .....           | " <i>Cæliocrinus dilatatus</i> .                                                                                                                                                                   |
| Burlington, Ia. | Two crowns with considerable fragments of the stems attached. Imbedded in the same block. Not equivalent to <i>Poteriocrinus Swallovi</i> , as claimed by W. & S., Rev. Palæocr., pt. III, p. 235. |
| St. Louis, Mo.  | An imbedded crown which preserves more of the arms than the figure shows.                                                                                                                          |
| .....           | Regarded by W. & S. as a subgenus of <i>Poteriocrinus</i> .                                                                                                                                        |
| Burlington, Ia. | As <i>Poteriocrinus</i> ( <i>Scaphiocrinus</i> ) <i>carinatus</i> . An imperfect crown with somewhat displaced plates.                                                                             |
| .....           | See <i>Eupachycrinus orbicularis</i> .                                                                                                                                                             |
| .....           | " <i>Graphiocrinus tortuosus</i> .                                                                                                                                                                 |
| .....           | As <i>Actinocrinus pentagonus</i> .                                                                                                                                                                |
| Burlington, Ia. | A small dorsal cup of the original type series, which possesses, however, the characters of <i>Steganocrinus araneolus</i> M. & W.                                                                 |
| Boonville, Mo.  | As <i>Forbesiocrinus Giddingei</i> . A crown retaining small fragment of stem.                                                                                                                     |
| .....           | As <i>Forbesiocrinus juvenis</i> .                                                                                                                                                                 |
| Burlington, Ia. | Dorsal cup with fragment of stem attached.                                                                                                                                                         |

## Class CRINOIDEA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.       | REFERENCE.  |       |       |        |       |
|------------------|------------------|----------------------|----------------------------------|-------------|-------|-------|--------|-------|
|                  |                  |                      |                                  | Work.       | Vol.  | P.    | Pl.    | Figs. |
| Burl.            | $\frac{5046}{1}$ | Type.                | <b>Teleiocrinus</b> W. & S.      |             |       |       |        |       |
|                  |                  |                      | ægilops . . . . . <i>Hall.</i>   | Ia. Sup.    | ..... | 5     | .....  | ..... |
|                  |                  |                      | <i>Whitf.</i> Mem. A. M.         | I           | 20    | 2     | 27, 28 |       |
|                  |                  |                      | <b>Trematocrinus</b> Hall.       |             |       |       |        |       |
|                  |                  |                      | <i>papillatus</i> . . . . .      | .....       | ..... | ..... | .....  | ..... |
| Keok.            | $\frac{5047}{1}$ | Type.                | <b>Vasocrinus</b> Lyon.          |             |       |       |        |       |
|                  |                  |                      | Lyoni . . . . . <i>Hall.</i>     | Ia. Crin.   | ..... | 5     | .....  | ..... |
|                  |                  |                      | "                                | D. N. S. C. | ..... | 298   | 5      | 13    |
|                  |                  |                      | <b>Zeacrinus</b> Troost.         |             |       |       |        |       |
|                  |                  |                      | scoparius . . . . . <i>Hall.</i> | Ia. Crin.   | ..... | 8     |        |       |
|                  |                  |                      | "                                | D. N. S. C. | ..... | 305   |        |       |
| Burl.            | $\frac{5048}{1}$ | "                    | <i>Whitf.</i> Mem. A. M.         | I           | 34    | 3     | 19, 20 |       |

## Class BLASTOIDEA.

|        |                  |                    |                                         |             |          |       |       |        |       |
|--------|------------------|--------------------|-----------------------------------------|-------------|----------|-------|-------|--------|-------|
|        |                  |                    | <b>Codaster</b> McCoy.                  |             |          |       |       |        |       |
|        |                  |                    | <i>Whitei</i> .....                     | .....       | .....    | ..... | ..... | .....  | ..... |
|        |                  |                    | <b>Orophocrinus</b> von Seebach.        |             |          |       |       |        |       |
| Burl.  | $\frac{5049}{1}$ | Type.              | <i>Whitii</i> ..... <i>Hall.</i>        | Ia. Crin.   | .....    | 10    | ..... | .....  | ..... |
|        |                  |                    | "                                       | D. N. S. C. | .....    | 327   | ...   | .....  | ..... |
|        |                  |                    | <i>Whitf.</i>                           | Mem. A. M.  | I        | 36    | 3     | 25-28  |       |
|        |                  |                    | <b>Pentremites</b> Say.                 |             |          |       |       |        |       |
| Keok.  | $\frac{5050}{1}$ | "                  | <i>bipyramidalis</i> ..... <i>Hall.</i> | Geol. Ia.   | I, pt. 2 | 607   | 15    | 2      |       |
| St. L. | $\frac{5051}{1}$ | "                  | <i>conoideus</i> ..... <i>Hall.</i>     | T. A. I.    | 4        | 5     |       |        |       |
|        |                  |                    | "                                       | Geol. Ia.   | I, pt. 2 | 655   | 22    | 8      |       |
|        |                  |                    | <i>Whitf.</i>                           | A. M. N. H. | I        | 44    | 9     | 32     |       |
|        |                  |                    | <i>Hall.</i>                            | Geol. Ind.  | 12       | 323   | 32    | 32     |       |
| "      | $\frac{5051}{2}$ | "                  | "                                       | T. A. I.    | 4        | 5     |       |        |       |
| "      | $\frac{5051}{3}$ | "                  | "                                       | "           | 4        | 5     |       |        |       |
| "      | $\frac{5052}{1}$ | "                  | <i>Koninckanus</i> ..... <i>Hall.</i>   | "           | 4        | 4     |       |        |       |
|        |                  |                    | "                                       | Geol. Ia.   | I, pt. 2 | 656   | 22    | I Ia-c |       |
|        |                  |                    | <i>Whitf.</i>                           | A. M. N. H. | I        | 43    | 9     | 33     |       |
|        |                  |                    | <i>Hall.</i>                            | Geol. Ind.  | 12       | 322   | 32    | 33     |       |
| "      | $\frac{5052}{2}$ | "                  | "                                       | T. A. I.    | 4        | 4     |       |        |       |
|        |                  |                    | <i>Woodmani</i> .....                   | .....       | .....    | ..... | ..... | .....  | ..... |
|        |                  |                    | <b>Tricælocrinus</b> M. & W.            |             |          |       |       |        |       |
| Keok.  | $\frac{5053}{1}$ | Gen. and Sp. Type. | <i>Woodmani</i> .... <i>M. &amp; W.</i> | P. A. N. S. | 20       | 356   | ..... | .....  | ..... |
|        |                  |                    | "                                       | Geol. Ill.  | 5        | 506   | 16    | 4a-d   |       |

## Class ECHINOIDEA

|        |                  |       |                                  |             |          |     |    |       |
|--------|------------------|-------|----------------------------------|-------------|----------|-----|----|-------|
| St. L. | $\frac{5054}{1}$ | Type. | <b>Archæocidaris</b> McCoy.      |             |          |     |    |       |
|        |                  |       | Wortheni..... <i>Hall.</i>       | Geol. Ia.   | I, pt. 2 | 700 | 26 | 4a-e  |
|        |                  |       | <i>Jackson.</i>                  | B. G. S. A. | 7        | 214 | 8  | 43-45 |
| "      | "                | "     | " ..... <i>Hall.</i>             | Geol. Ia.   | I, pt. 2 | 700 | 26 | 4f    |
|        |                  |       | <b>Melonites</b> N. & O.         |             |          |     |    |       |
| Wars.  | $\frac{5055}{1}$ | "     | septenarius, <i>W. (Jackson)</i> | B. G. S. A. | 7        | 182 | 9  | 49    |



| LOCALITY.                                              | REMARKS.                                                                                                                                                                                                                                    |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....<br>Burlington, Ia.                               | As <i>Actinocrinus ægilops</i> .<br>A calyx of average size. Species regarded by W. & S. as a synonym<br>of <i>Teleocrinus umbrosus</i> , N. A. C., p. 628.<br>See <i>Gilbertsocrinus papillatus</i> .                                      |
| .....<br>Crawfordsville, Ind.                          | As <i>Cyathocrinus Lyoni</i> .<br>" " " " An imperfect crown, imbedded. W. & S.<br>make this species the type of <i>Vasocrinus</i> as emended by them,<br>Revision Palæocr., pt. 1, p. 96.                                                  |
| Burlington, Ia.                                        | A crown which has lost the tips of the arms.                                                                                                                                                                                                |
| .....                                                  | See <i>Orophocrinus Whitii</i> .                                                                                                                                                                                                            |
| .....<br>Burlington, Ia.                               | As <i>Codaster Whitei</i> .<br>" " " "<br>An entire calyx and the internal cast of another, the latter coming<br>from the brown sandstone at the base of the Burlington beds, while<br>the former came from the white limestone at the top. |
| Missouri.                                              | Nearly entire body.                                                                                                                                                                                                                         |
| Bloomington, Ind.<br>Spergen Hill, Ind.<br>Alton, Ill. | A large body. Eleven others are in the original type series.<br>Twelve bodies from this locality are in the original type series.<br>Three bodies from this locality are in the original type series.                                       |
| Spergen Hill, Ind.<br>Alton, Ill.                      | Two bodies. Nine others from this locality are in original type series.<br>Two bodies from this locality are in the original type series.<br>See <i>Tricælocrinus Woodmani</i> .                                                            |
| .....<br>Salem, Ind.                                   | As <i>Pentremites</i> ( <i>Troostocrinus</i> ?) <i>Woodmani</i> .<br>" " " " " " New generic name<br>proposed under the description of the species. A large body,<br>partly silicified.                                                     |
| Near St. Louis, Mo.<br>" " "                           | A well preserved, flattened individual.<br>A spine, imbedded.                                                                                                                                                                               |
| Buzzard's Roost,<br>Franklin Co., Ala.                 | Cast in chert. Name given by R. P. Whitfield in Jackson's paper.                                                                                                                                                                            |

Class ECHINOIDEA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                                 | REFERENCE.  |      |     |      |       |
|---------------|------------------|--------------------|----------------------------------------------------------------------------|-------------|------|-----|------|-------|
|               |                  |                    |                                                                            | Work.       | Vol. | P.  | Pl.  | Figs. |
| Keok.         | $\frac{5056}{1}$ | Fig'd.             | <b>Oligoporus</b> M. & W.<br>nobilis ( <i>M. &amp; W.</i> ) <i>Jackson</i> | B. G. S. A. | 7    | 198 | 6    | 35    |
| Wav.          | $\frac{5057}{1}$ | Gen. and Sp. Type. | <b>Lepidechinus</b> Hall.<br>rarispinus ..... <i>Hall.</i>                 | N. Y. S. M. | 20   | 295 | 9    | 10    |
| "             | $\frac{5057}{2}$ | "                  | " ..... "                                                                  | " "         | 20   | 295 | .... | ..... |

MOLLUSCOIDEA.

|       |                  |                    |                                                               |                          |                       |            |            |               |
|-------|------------------|--------------------|---------------------------------------------------------------|--------------------------|-----------------------|------------|------------|---------------|
| Wars. | $\frac{5058}{1}$ | Gen. and Sp. Type. | <b>Archimedes</b> Lesueur.<br>Wortheni..... <i>Hall.</i><br>" | A. A. A. S.<br>Geol. Ia. | 10, pt. 2<br>1, pt. 2 | 178<br>651 | ....<br>22 | .....<br>3-5b |
|       |                  |                    | <b>Fenestella</b> Lonsdale.<br><i>Wortheni</i> .....          |                          |                       |            |            |               |
| Wars. | $\frac{5059}{1}$ | Type.              | <b>Ptilopora</b> McCoy.<br>Prouti ..... <i>Hall.</i>          | Geol. Ia.                | 1, pt. 2              | 653        | 22         | 6a-c          |
| "     | $\frac{5059}{2}$ | "                  | " ..... "                                                     | " "                      | 1, pt. 2              | 653        | 22         | 7             |

Class BRACHIOPODA.

|              |                                      |        |                                                                                                                                             |                                                    |                          |                        |                       |                                 |
|--------------|--------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------|------------------------|-----------------------|---------------------------------|
| Kind.        | $\frac{5060}{1}$                     | Fig'd. | <b>Acambona</b> White.<br>prima ( <i>White</i> ).. <i>H. &amp; C.</i><br>"                                                                  | St. G. N. Y.<br>Pal. N. Y.                         | 13<br>8, pt. 2           | 797<br>119             | 37<br>51              | 21, 22<br>40, 41                |
| Burl. Chest. | $\frac{5061}{1}$<br>$\frac{5062}{1}$ | Type.  | <b>Athyris</b> McCoy.<br><i>hirsuta</i> .....<br>incrassata ..... <i>Hall.</i><br>subquadrata ..... <i>Hall.</i><br><i>trinucleus</i> ..... | Geol. Ia.<br>" "                                   | 1, pt. 2<br>1, pt. 2     | 600<br>703             | 12<br>27              | 6, <i>v. v.</i><br>2a-c         |
| St. L.       | $\frac{5063}{1}$                     | Type.  | <b>Camarophoria</b> King.<br>subcuneata ..... <i>Hall.</i><br>" .....<br><i>Whitfield.</i><br><i>Hall.</i>                                  | T. A. I.<br>Geol. Ia.<br>A. M. N. H.<br>Geol. Ind. | 4<br>1, pt. 2<br>1<br>12 | 11<br>658<br>51<br>333 | ....<br>23<br>6<br>29 | .....<br>3a-c<br>47-49<br>47-49 |
| "            | $\frac{5063}{2}$                     | "      | " ..... "                                                                                                                                   | T. A. I.                                           | 4                        | 11                     | ....                  | .....                           |
| "            | $\frac{5064}{1}$                     | "      | ? Wortheni..... <i>Hall.</i><br><i>Whitfield.</i><br><i>Hall.</i>                                                                           | " "<br>A. M. N. H.<br>Geol. Ind.                   | 4<br>1<br>12             | 11<br>54<br>334        | ....<br>6<br>29       | .....<br>35-39<br>35-39         |
| Wav.         | $\frac{5065}{1}$                     | "      | <b>Camarotoechia</b> H. & C.<br>contracta..... <i>Hall.</i>                                                                                 | Pal. N. Y.                                         | 4                        | 351                    | 55                    | 39, <i>v. v.</i>                |
| "            | $\frac{5066}{1}$                     | Fig'd. | sappho, <i>var.</i> ..... <i>Hall.</i>                                                                                                      | " "                                                | 4                        | 354                    | 55                    | 47, 49, 50                      |
| "            | "                                    | "      | " " ..... "                                                                                                                                 | " "                                                | 4                        | 354                    | 55                    | 48, 51                          |
| "            | "                                    | "      | " " ..... "                                                                                                                                 | " "                                                | 4                        | 354                    | 55                    | 52                              |



| LOCALITY.          | REMARKS.                                                                                                                                                                            |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Keokuk, Ia.        | Two detached plates imbedded with many others.                                                                                                                                      |
| Meadville, Pa.     | External imprint in gray sandstone.                                                                                                                                                 |
| Licking Co., Ohio. | Nearly entire cast, somewhat crushed. This and the preceding specimen are specially mentioned by R. T. Jackson, Studies of Palæechinoidea, Bull. Geol. Soc. Am., vol. 7, p. 227 ff. |

Class POLYZOA.

|                |                                                                                                                  |
|----------------|------------------------------------------------------------------------------------------------------------------|
| .....          | As <i>Fenestella</i> ( <i>Archimedes</i> ) <i>Wortheni</i> .                                                     |
| Warsaw, Ill.   | An axis, part of which was figured, and part of an axis which bears three of the fronds in position on one side. |
| .....          | See <i>Archimedes Wortheni</i> .                                                                                 |
| Warsaw, Ill.   | Imbedded fragment showing celluliferous side.                                                                    |
| Boonville, Mo. | Imbedded fragment showing non-celluliferous side.                                                                |

|                    |                                                                                                                                                                               |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Burlington, Ia.    | A somewhat incomplete cast.                                                                                                                                                   |
| .....              | See <i>Cleiothyris hirsuta</i> .                                                                                                                                              |
| Hannibal, Mo.      | A ventral valve, imbedded.                                                                                                                                                    |
| Chester, Ill.      | An entire individual.                                                                                                                                                         |
| .....              | See <i>Seminula trinucleus</i> ,                                                                                                                                              |
| .....              | As <i>Rhynconella subcuneata</i> .                                                                                                                                            |
| .....              | “ <i>Rhynchonella</i> “                                                                                                                                                       |
| .....              | “ “ “                                                                                                                                                                         |
| Bloomington, Ind.  | An individual. Seven others are in the original type series.                                                                                                                  |
| Spergen Hill, Ind. | As <i>Rhynconella subcuneata</i> . Three individuals from this locality are in the original type series.                                                                      |
| .....              | As <i>Rhynconella Wortheni</i> .                                                                                                                                              |
| Alton, Ill.        | Two individuals.                                                                                                                                                              |
| Licking Co., Ohio. | As <i>Rhynchonella</i> ( <i>Stenocisma</i> ) <i>contracta</i> . Cast of ventral valve in block with types of <i>Camarotæchia sappho</i> , var., figs. 48, 51, of same plate.  |
| “ “                | As <i>Rhynchonella</i> ( <i>Stenocisma</i> ) <i>sappho</i> var. Casts of a dorsal and two ventral valves.                                                                     |
| “ “                | As <i>Rhynchonella</i> ( <i>Stenocisma</i> ) <i>sappho</i> var. Casts of two opposite valves imbedded in same block with <i>Camarotæchia contracta</i> , fig. 39, same plate. |
| “ “                | As <i>Rhynchonella</i> ( <i>Stenocisma</i> ) <i>sappho</i> var. Cast of an individual, flattened vertically.                                                                  |

Class BRACHIOPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.                             | REFERENCE.                 |               |             |          |                |
|------------------|------------------|------------------------|--------------------------------------------------------|----------------------------|---------------|-------------|----------|----------------|
|                  |                  |                        |                                                        | Work.                      | Vol.          | P.          | Pl.      | Figs.          |
| St. L.           | $\frac{5067}{1}$ | Type.                  | <b>Centronella</b> Billings.                           |                            |               |             |          |                |
|                  |                  |                        | crassicardinalis... <i>Whitf.</i><br><i>Hall.</i>      | A. M. N. H.<br>Geol. Ind.  | I<br>12       | 55<br>....  | 6<br>29  | 50-52<br>50-52 |
| Burl.            | $\frac{5068}{1}$ | Fig'd.                 | <b>Chonetes</b> Fischer.                               |                            |               |             |          |                |
|                  |                  |                        | <i>Fischeri</i> .....                                  | .....                      | .....         | .....       | .....    | .....          |
|                  |                  |                        | illinoisensis ( <i>Worthen</i> ) <i>H.</i>             | Geol. Ia.                  | I, pt. 2      | 598         | 12       | Ia-c, 2        |
| Kind.            | $\frac{5069}{1}$ | "                      | Logani ( <i>N. &amp; P.</i> )... <i>Hall.</i>          | " "                        | 1, pt. 2      | 598         | 12       | Id, e          |
|                  |                  |                        | <i>Logani</i> Hall (non <i>N. &amp; P.</i> ) .....     | .....                      | .....         | .....       | .....    | .....          |
| Kind.            | $\frac{5070}{1}$ | Fig'd Sp.<br>and G. T. | <b>Chonopectus</b> Hall & Clarke.                      |                            |               |             |          |                |
|                  |                  |                        | <i>Fischeri</i> ( <i>N. &amp; P.</i> ) <i>Hall.</i>    | Geol. Ia.                  | I, pt. 2      | 517         | 7        | Ia, v. v.      |
|                  |                  |                        | " " <i>H. &amp; C.</i>                                 | St. G. N. Y.               | 2             | ...         | 47       | 17, "          |
|                  |                  |                        | " " <i>Hall.</i>                                       | Pal. N. Y.                 | 8, pt. I      | 312         | 16       | 17, "          |
|                  |                  |                        | " " <i>H. &amp; C.</i>                                 | Geol. Ia.                  | I, pt. 2      | 517         | 7        | Ib, c          |
|                  |                  |                        | " " <i>H. &amp; C.</i>                                 | St. G. N. Y.               | 2             | ....        | 47       | 31 <i>enl.</i> |
| "                |                  | "                      | " " <i>H. &amp; C.</i>                                 | Pal. N. Y.                 | 8, pt. I      | 312         | 16       | 31 "           |
|                  |                  |                        | " " <i>Hall.</i>                                       | " "                        | 8, pt. I      | 312         | 15 B     | 23, v. v.      |
| St. L.           | $\frac{5071}{1}$ | Type.                  | <b>Cleiothyris</b> King.                               |                            |               |             |          |                |
|                  |                  |                        | <i>hirsuta</i> ..... <i>Hall.</i>                      | T. A. I.                   | 4             | 8           | ....     | .....          |
|                  |                  |                        | " " <i>Whitf.</i>                                      | A. M. N. H.                | I             | 49          | 6        | 18, d. v. X 2  |
|                  |                  |                        | " " <i>Hall.</i>                                       | Geol. Ind.                 | 12            | 328         | 29       | 18, "          |
|                  |                  |                        | " " .....                                              | T. A. I.                   | 4             | 8           | ....     | .....          |
|                  |                  |                        | " " .....                                              | " "                        | 4             | 8           | ....     | .....          |
| "                | $\frac{5071}{1}$ | Fig'd.                 | " ( <i>Hall</i> ) .... <i>Whitf.</i>                   | A. M. N. H.                | I             | 49          | 6        | 19-21          |
|                  |                  |                        | " " <i>Hall.</i>                                       | Geol. Ind.                 | 12            | 328         | 29       | 19-21          |
| Wav.             | $\frac{5072}{1}$ | Type.                  | <b>Cryptonella</b> Hall.                               |                            |               |             |          |                |
|                  |                  |                        | ? <i>eudora</i> ..... <i>Hall.</i>                     | Pal. N. Y.                 | 4             | 398         | 61       | 33, d. v.      |
| "                |                  | "                      | ? " .....                                              | " "                        | 4             | 398         | 61       | 38, "          |
|                  |                  |                        |                                                        |                            |               |             |          |                |
| Keok.            | $\frac{5587}{1}$ | "                      | <b>Derbya</b> Waagen.                                  |                            |               |             |          |                |
|                  |                  |                        | <i>keokuk</i> ..... <i>Hall.</i><br><i>H. &amp; C.</i> | St. G. N. Y.<br>Pal. N. Y. | 2<br>8, pt. I | ....<br>262 | 41<br>11 | 3<br>3         |
| St. L.           | $\frac{5073}{1}$ | "                      | <b>Dielasma</b> King.                                  |                            |               |             |          |                |
|                  |                  |                        | <i>formosum</i> .....                                  | T. A. I.                   | 4             | 6           | ....     | .....          |
|                  |                  |                        | " " <i>Whitf.</i>                                      | A. M. N. H.                | I             | 55          | 6        | 59, 60         |
|                  |                  |                        | " " <i>Hall.</i>                                       | Geol. Ind.                 | 12            | 337         | 29       | 59, 60         |
|                  |                  |                        | " " ( <i>Hall</i> ) <i>H. &amp; C.</i>                 | Pal. N. Y.                 | 8, pt. 2      | 296         | 81       | 20, d. v.      |
|                  |                  |                        | " " " "                                                | St. G. N. Y.               | 13            | ....        | 53       | 15, "          |
|                  |                  |                        | " " " "                                                | Pal. N. Y.                 | 8, pt. 2      | 296         | 81       | 21-23          |
|                  |                  |                        | " " .....                                              | T. A. I.                   | 4             | 6           | ...      | .....          |
|                  |                  |                        | " " .....                                              | " "                        | 4             | 6           | ....     | .....          |
|                  |                  |                        | " " ( <i>Hall</i> ) . <i>Whitf.</i>                    | A. M. N. H.                | I             | 55          | 6        | 61-64          |
| "                | $\frac{5073}{1}$ | Fig'd.                 | " " <i>Hall.</i>                                       | Geol. Ind.                 | 12            | 337         | 29       | 61-64          |
|                  |                  |                        | <i>turgidum</i> ..... <i>Hall.</i>                     | T. A. I.                   | 4             | 6           | ....     | .....          |
| "                | $\frac{5074}{1}$ | Type.                  | " " <i>Whitf.</i>                                      | A. M. N. H.                | I             | 54          | 6        | 53-55          |
|                  |                  |                        | " " <i>Hall.</i>                                       | Geol. Ind.                 | 12            | 336         | 29       | 53-55          |



| LOCALITY.            | REMARKS.                                                                                                                              |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Spergen Hill, Ind.   | A silicified ventral valve.                                                                                                           |
| .....                | See <i>Chonopectus Fischeri</i> .                                                                                                     |
| Quincy, Ill.         | As <i>Chonetes Logani</i> N. & P. Two ventral valves and a dorsal valve imbedded in a greenish white limestone.                       |
| Burlington, Ia.      | A somewhat broken ventral valve. Probably a specimen of <i>Chonetes illinoisensis</i> Worthen.                                        |
| .....                | See <i>Chonetes illinoisensis</i> .                                                                                                   |
| .....                | As <i>Chonetes Fischeri</i> .                                                                                                         |
| .....                | " " "                                                                                                                                 |
| Burlington, Ia.      | Imperfect cast.                                                                                                                       |
| .....                | As <i>Chonetes Fischeri</i> .                                                                                                         |
| .....                | " " "                                                                                                                                 |
| Burlington, Ia.      | Probably the original of this enlargement also, which was not made from the original of fig. 17. Ventral valve imbedded in limestone. |
| " "                  | Cast of a small ventral valve.                                                                                                        |
| .....                | As <i>Spirigera (Athyris) hirsuta</i> .                                                                                               |
| .....                | " <i>Athyris hirsuta</i> .                                                                                                            |
| Spergen Hill, Ind.   | " " " A somewhat exfoliated individual. Eleven others from this locality are in the type series.                                      |
| Alton, Ill.          | As <i>Spirigera (Athyris) hirsuta</i> . Eleven indiv. of orig. type series.                                                           |
| Bloomington, Ind.    | " " " " Twelve indiv. of orig. type series.                                                                                           |
| .....                | " <i>Athyris hirsuta</i> .                                                                                                            |
| Spergen Hill, Ind.   | " " " A weathered and silicified individual which was not in the original series.                                                     |
| Licking Co., Ohio.   | As <i>Cryptonella (Terebratula) eudora</i> . Cast of dors. valve, imbedded.                                                           |
| " "                  | " " " " Cast of an individual.                                                                                                        |
| .....                | As <i>Streptorhynchus keokuk</i> .                                                                                                    |
| Warsaw, Ill.         | Internal cast of a large ventral valve.                                                                                               |
| .....                | As <i>Terebratula formosa</i> .                                                                                                       |
| .....                | " " "                                                                                                                                 |
| Spergen Hill, Ind.   | " " " A small entire individual. Ten others from this locality are in the original type series.                                       |
| Paynter's Hill, Ind. | A very large, silicified individual, somewhat crushed on one side.                                                                    |
| Spergen Hill, Ind.   | An individual cut so as to show the loop.                                                                                             |
| Alton, Ill.          | As <i>Terebratula formosa</i> . Ten small individuals from this locality are in the original type series.                             |
| Bloomington, Ind.    | As <i>Terebratula formosa</i> . Nine individuals from this locality are in the original type series.                                  |
| .....                | As <i>Terebratula formosa</i> .                                                                                                       |
| Spergen Hill, Ind.   | " " " Two very large individuals.                                                                                                     |
| .....                | " " <i>turgida</i> .                                                                                                                  |
| .....                | " " "                                                                                                                                 |
| Bloomington, Ind.    | " " " An individual of average size. Eleven others from this locality are in the original type series.                                |

## Class BRACHIOPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                          | REFERENCE.                              |                           |                     |                  |                                   |
|------------------|------------------|----------------------|-----------------------------------------------------|-----------------------------------------|---------------------------|---------------------|------------------|-----------------------------------|
|                  |                  |                      |                                                     | Work.                                   | Vol.                      | P.                  | Pl.              | Figs.                             |
|                  |                  |                      | <b>Dielasma</b> King.—Cont.                         |                                         |                           |                     |                  |                                   |
| St. L.           | $\frac{5074}{2}$ | Type.                | turgidum.....Hall.                                  | T. A. I.                                | 4                         | 6                   | ....             | .....                             |
| "                | $\frac{5074}{3}$ | "                    | " ..... "                                           | " "                                     | 4                         | 6                   | ....             | .....                             |
| "                | $\frac{5074}{4}$ | Fig'd.               | " (Hall)... Whitf.<br>Hall.                         | A. M. N. H.<br>Geol. Ind.               | I<br>12                   | 54<br>336           | 6<br>29          | 56-58<br>56-58                    |
|                  |                  |                      | <b>Discina</b> Lamarck,<br><i>Newberryi</i> .....   | .....                                   | .....                     | .....               | .....            | .....                             |
|                  |                  |                      | <b>Eumetria</b> Hall.                               |                                         |                           |                     |                  |                                   |
| St. L.           | $\frac{5075}{1}$ | Type.                | Verneuilliana..... Hall.<br>" "<br>H. & C.          | T. A. I.<br>Geol. Ia.<br>Pal. N. Y.     | 4<br>1, pt. 2<br>8, pt. 2 | 9<br>657<br>119     | ....<br>23<br>51 | .....<br>1a, b, d<br>17, enl. X 3 |
| "                | $\frac{5075}{2}$ | "                    | " ..... Hall.                                       | Geol. Ia.                               | 1, pt. 2                  | 657                 | 23               | 1c, d. v.                         |
| "                | "                | "                    | " (Hall) Whitf.<br>Hall.                            | A. M. N. H.<br>Geol. Ind.               | I<br>12                   | 50<br>335           | 6<br>29          | 28, 30<br>28, 30                  |
| "                | $\frac{5075}{3}$ | "                    | " ..... "                                           | T. A. I.                                | 4                         | 9                   | ....             | .....                             |
| "                | $\frac{5075}{4}$ | Fig'd.               | " (Hall) Whitf.<br>Hall.                            | A. M. N. H.<br>Geol. Ind.               | I<br>12                   | 50<br>335           | 6<br>29          | 29, d. v.<br>29, "                |
|                  |                  |                      | <b>Lingula</b> Bruguière.                           |                                         |                           |                     |                  |                                   |
| Wav.             | $\frac{5076}{1}$ | Type.                | cuyahoga.....Hall.<br>" "                           | N. Y. S. M.<br>Pal. N. Y.               | 16<br>4                   | 24<br>15            | ....<br>I        | .....<br>5                        |
| "                | $\frac{5077}{1}$ | "                    | melie ..... Hall.<br>" "                            | N. Y. S. M.<br>Pal. N. Y.               | 16<br>4                   | 24<br>14            | ....<br>I        | .....<br>3, 4                     |
|                  |                  |                      | <b>Orbiculoidea</b> d'Orbigny.                      |                                         |                           |                     |                  |                                   |
| "                | $\frac{5078}{1}$ | "                    | Newberryi.....Hall.<br>" "                          | N. Y. S. M.<br>Pal. N. Y.               | 16<br>4                   | 30<br>25            | ....<br>I        | .....<br>10a, b                   |
| "                | "                | "                    | " ..... "                                           | " "                                     | 4                         | 25                  | I                | 11a-c                             |
|                  |                  |                      | <b>Orthis</b> Dalman.                               |                                         |                           |                     |                  |                                   |
|                  |                  |                      | <i>dubia</i> .....                                  | .....                                   | .....                     | .....               | .....            | .....                             |
|                  |                  |                      | <i>inequalis</i> .....                              | .....                                   | .....                     | .....               | .....            | .....                             |
|                  |                  |                      | <i>Michelina</i> ,<br>var. <i>burlingtonensis</i> . | .....                                   | .....                     | .....               | .....            | .....                             |
|                  |                  |                      | <i>Swallowi</i> .....                               | .....                                   | .....                     | .....               | .....            | .....                             |
|                  |                  |                      | <b>Orthothetes</b> Fischer.                         |                                         |                           |                     |                  |                                   |
| Kind.            | $\frac{5079}{1}$ | Type.                | inæqualis.....Hall.<br>" "<br>H. & C.               | Geol. Ia.<br>St. G. N. Y.<br>Pal. N. Y. | 1, pt. 2<br>2<br>8, pt. I | 490<br>....<br>.... | 2<br>42<br>9 A   | 6a-c<br>22<br>22                  |
| "                | "                | "                    | " ..... Hall.<br>H. & C.                            | St. G. N. Y.<br>Pal. N. Y.              | 2<br>8, pt. I             | ....<br>....        | 42<br>9 A        | 20, int. v. v.<br>20, "           |
| "                | "                | "                    | " ..... Hall.<br>H. & C.                            | St. G. N. Y.<br>Pal. N. Y.              | 2<br>8, pt. I             | ....<br>....        | 42<br>9 A        | 21, d. v.<br>21, "                |



| LOCALITY.             | REMARKS.                                                                                                                                                                  |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Spergen Hill, Ind.    | As <i>Terebratula turgida</i> . One large and two small individuals from this locality are in the original type series.                                                   |
| Alton, Ill.           | As <i>Terebratula turgida</i> . Twelve individuals from this locality are in the original type series.                                                                    |
| .....                 | As <i>Terebratula turgida</i> .                                                                                                                                           |
| Ellettsville, Ind.    | " " " A large, silicified individual.                                                                                                                                     |
| .....                 |                                                                                                                                                                           |
| .....                 | See <i>Orbiculoidea Newberryi</i> .                                                                                                                                       |
| .....                 |                                                                                                                                                                           |
| .....                 | As <i>Retzia Verneuiliانا</i> .                                                                                                                                           |
| .....                 | " " "                                                                                                                                                                     |
| Bloomington, Ind.     | An entire individual. Twelve others from this locality are in the original type series.                                                                                   |
| Spergen Hill, Ind.    | As <i>Retzia Verneuiliانا</i> . An entire individual of elongate form.                                                                                                    |
| " "                   | An entire individual. Eight others from this locality are in the original type series.                                                                                    |
| Alton, Ill.           | Twelve individuals from this locality are in the original type series.                                                                                                    |
| Paynter's Hill, Ind.  | A very perfect silicified individual which was not in the original type series.                                                                                           |
| Cuyahoga Falls, Ohio. | Imbedded.                                                                                                                                                                 |
| Chagrin Falls, Ohio.  | Imprints of two valves in the same block. One retains some shell.                                                                                                         |
| .....                 |                                                                                                                                                                           |
| Cuyahoga Falls, Ohio. | As <i>Discina Newberryi</i> .                                                                                                                                             |
| " "                   | " " " Two large opposite valves, considerably exfoliated, imbedded.                                                                                                       |
| " "                   | As <i>Discina Newberryi</i> . Two dorsal valves, exfoliated, imbedded. Schuchert, Syn. Am. Foss. Brach.. p. 261, refers this species to the genus <i>Lingulodiscina</i> . |
| .....                 |                                                                                                                                                                           |
| .....                 | See <i>Rhipidomella dubia</i> .                                                                                                                                           |
| .....                 | " <i>Orthotheses inæqualis</i> .                                                                                                                                          |
| .....                 |                                                                                                                                                                           |
| .....                 | " <i>Rhipidomella burlingtonensis</i> .                                                                                                                                   |
| .....                 | " <i>Schizophoria Swallovi</i> .                                                                                                                                          |
| .....                 |                                                                                                                                                                           |
| .....                 | As <i>Orthis inæqualis</i> .                                                                                                                                              |
| .....                 | " <i>Streptorhynchus æquivalvis</i> by error.                                                                                                                             |
| Burlington, Ia.       | Casts of the opposite valves.                                                                                                                                             |
| .....                 | As <i>Streptorhynchus æquivalvis</i> by error.                                                                                                                            |
| Burlington, Ia.       | A slightly imperfect ventral valve.                                                                                                                                       |
| .....                 | As <i>Streptorhynchus æquivalvis</i> by error.                                                                                                                            |
| Burlington, Ia.       | Cast of a dorsal valve.                                                                                                                                                   |

## Class BRACHIOPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                         | REFERENCE.   |          |       |       |                       |
|------------------|------------------|----------------------|----------------------------------------------------|--------------|----------|-------|-------|-----------------------|
|                  |                  |                      |                                                    | Work.        | Vol.     | P.    | Pl.   | Figs.                 |
|                  |                  |                      | <b>Productella</b> Hall.                           |              |          |       |       |                       |
| Kind.            | $\frac{5080}{1}$ | Type.                | concentrica . . . . . Hall.                        | Geol. Ia.    | I, pt. 2 | 517   | 7     | 3, v. v.              |
|                  |                  |                      | <i>Newberryi</i> . . . . .                         | .....        | .....    | ..... | ..... | .....                 |
| "                | $\frac{5081}{1}$ | Type.                | pyxidata . . . . . Hall.                           | Geol. Ia.    | I, pt. 2 | 498   | 3     | 8a-e                  |
|                  |                  |                      | " " (H. & C.)                                      | St. G. N. Y. | 2        | ....  | 48    | 34, <i>int. d. v.</i> |
|                  |                  |                      | " " "                                              | " "          | II       | ....  | 21    | 23, "                 |
|                  |                  |                      | " " "                                              | Pal. N. Y.   | 8, pt. I | ....  | 17    | 34, "                 |
| "                | $\frac{5082}{1}$ | "                    | Shumardana . . . . . Hall.                         | Geol. Ia.    | I, pt. 2 | 499   | 7     | 2, v. v.              |
|                  |                  |                      | " " (H. & C.)                                      | St. G. N. Y. | 2        | ....  | 48    | 7, "                  |
|                  |                  |                      | " " "                                              | Pal. N. Y.   | 8, pt. I | ....  | 17    | 7, "                  |
| "                | $\frac{5082}{2}$ | "                    | " " . . . . . Hall.                                | Geol. Ia.    | I, pt. 2 | 499   | 3     | 9, <i>int. d. v.</i>  |
|                  |                  |                      | sp. ? . . . . .                                    | St. G. N. Y. | 2        | ....  | 49    | 4                     |
|                  |                  |                      | <b>Productus</b> Sowerby.                          |              |          |       |       |                       |
| Keok.            | $\frac{5083}{1}$ | Fig'd.               | alternatus (N. & P.) Hall.                         | St. G. N. Y. | 2        | ....  | 49    | 14, v. v.             |
|                  |                  |                      | " " (H. & C.)                                      | Pal. N. Y.   | 8, pt. I | 327   | 18    | 14, "                 |
| Kind.            | $\frac{5084}{1}$ | Type.                | arcuatus . . . . . Hall.                           | Geol. Ia.    | I, pt. 2 | 518   | 7     | 4a, b                 |
| St. L.           | $\frac{5085}{1}$ | "                    | biseriatus . . . . . Hall.                         | T. A. I.     | 4        | 12    |       |                       |
|                  |                  |                      | " " Whitf.                                         | A. M. N. H.  | I        | 46    | 6     | 8, <i>int. X 2</i>    |
|                  |                  |                      | " " Hall.                                          | Geol. Ind.   | 12       | 325   | 29    | 8, "                  |
| "                | $\frac{5085}{2}$ | "                    | " (Hall) . . . Whitf.                              | A. M. N. H.  | I        | 46    | 6     | 9, <i>int. d. v.</i>  |
|                  |                  |                      | " " Hall.                                          | Geol. Ind.   | 12       | 325   | 29    | 9, "                  |
| "                | $\frac{5085}{3}$ | Fig'd.               | " (Hall) . . . Whitf.                              | A. M. N. H.  | I        | 325   | 29    | 10-12                 |
|                  |                  |                      | " " Hall.                                          | Geol. Ind.   | 12       | 325   | 29    | 10-12                 |
| Burl.            | $\frac{5086}{1}$ | Type.                | burlingtonensis . . . . Hall.                      | Geol. Ia.    | I, pt. 2 | 598   | 12    | 3a, b                 |
| "                | "                | "                    | " " . . . . . "                                    | " "          | I, pt. 2 | 598   | 12    | 3c-e, g               |
| "                | "                | "                    | " " . . . . . "                                    | " "          | I, pt. 2 | 598   | 12    | 3f, <i>int. d. v.</i> |
|                  |                  |                      | <i>concentricus</i> . . . . .                      | .....        | .....    | ..... | ..... | .....                 |
|                  |                  |                      | <i>Flemingi</i> ,<br>var. <i>burlingtonensis</i> . | .....        | .....    | ..... | ..... | .....                 |
| St. L.           | $\frac{5087}{1}$ | Type.                | indianensis . . . . . Hall.                        | T. A. I.     | 4        | 13    |       |                       |
|                  |                  |                      | " " Whitf.                                         | A. M. N. H.  | I        | 47    | 6     | 6, 7                  |
|                  |                  |                      | " " Hall.                                          | Geol. Ind.   | 12       | 326   | 29    | 6, 7                  |
| Wav.             | $\frac{5088}{1}$ | Fig'd.               | laevicosta (White)? Hall.                          | St. G. N. Y. | 2        | ....  | 49    | 4, v. v.              |
|                  |                  |                      | " " (H. & C.)                                      | Pal. N. Y.   | 8, pt. I | ....  | 18    | 4, "                  |
| St. L.           | $\frac{5089}{1}$ | "                    | marginicinctus (Prout) H.                          | Geol. Ia.    | I, pt. 2 | 674   | 24    | 3a-c                  |
| Keok.            | $\frac{5090}{1}$ | Type.                | mesialis . . . . . Hall.                           | " "          | I, pt. 2 | 636   | 19    | 2a-c                  |
|                  |                  |                      | " " "                                              | St. G. N. Y. | 2        | ....  | 49    | 9, 10                 |
|                  |                  |                      | " " (H. & C.)                                      | Pal. N. Y.   | 8, pt. I | ....  | 18    | 9, 10                 |
| Wav.             | $\frac{5091}{1}$ | "                    | Newberryi . . . . . Hall.                          | St. G. N. Y. | 2        | ....  | 49    | 2, 3                  |
|                  |                  |                      | " " (H. & C.)                                      | Pal. N. Y.   | 8, pt. I | ....  | 18    | 2, 3                  |
| Keok.            | $\frac{5092}{1}$ | "                    | ovatus . . . . . Hall.                             | St. G. N. Y. | 2        | ....  | 49    | 19                    |
|                  |                  |                      | " " (H. & C.)                                      | Pal. N. Y.   | 8, pt. I | ....  | 18    | 19                    |
|                  |                  |                      | <i>pyxidatus</i> . . . . .                         | .....        | .....    | ..... | ..... | .....                 |



| LOCALITY.            | REMARKS.                                                                                                                          |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Burlington, Ia.      | As <i>Productus concentricus</i> . Cast of a ventral valve.                                                                       |
| .....                | See “ <i>Newberryi</i> .                                                                                                          |
| .....                | As “ <i>pyxidatus</i> .                                                                                                           |
| Louisiana, Mo.       | Three individuals and a dorsal valve, imbedded separately. From the Lithographic limestone.                                       |
| .....                | As <i>Productus Shumardianus</i> .                                                                                                |
| Burlington, Ia.      | Ventral valve, imbedded. From the limestone.                                                                                      |
| Clarksville, Mo.     | As <i>Productus Shumardianus</i> . Dorsal valve imbedded so as to show the interior. From the Lithographic limestone.             |
| .....                | See <i>Productus laevicosta</i> .                                                                                                 |
| Warsaw, Ill.         | A small ventral valve.                                                                                                            |
| Burlington, Ia.      | A partly exfoliated ventral valve, imbedded.                                                                                      |
| Bloomington, Ind.    | Dorsal valve imbedded so as to show interior. Four other specimens from this locality are in the original type series.            |
| Alton, Ill.          | Dorsal valve, imbedded. Five others from this locality are in the original type series.                                           |
| Spergen Hill, Ind.   | Entire, silicified individual, not one of the original series.                                                                    |
| Burlington, Ia.      | As <i>Productus Flemingi</i> Sowerby, var. <i>burlingtonensis</i> . External cast of dorsal valve retaining some shell substance. |
| “ “                  | As <i>Productus Flemingi</i> Sowerby, var. <i>burlingtonensis</i> . A ventral valve, imbedded.                                    |
| “ “                  | As <i>Productus Flemingi</i> Sowerby, var. <i>burlingtonensis</i> . A partly exfoliated dorsal valve, imbedded.                   |
| .....                | See <i>Productella concentrica</i> .                                                                                              |
| .....                | “ <i>Productus burlingtonensis</i> .                                                                                              |
| Spergen Hill, Ind.   | Two individuals, one of which was figured.                                                                                        |
| .....                | As <i>Productella</i> sp.?                                                                                                        |
| Licking Co., Ohio.   | “ <i>Productus</i> sp.? cf. <i>Prattenanus</i> Norwood. Somewhat crushed, imperfect cast of a ventral valve.                      |
| St. Louis, Mo.       | Two opposite valves, imbedded separately.                                                                                         |
| Nauvoo, Ill.         | Two opposite valves, imbedded in separate blocks.                                                                                 |
| .....                | As <i>Productella Newberryi</i> .                                                                                                 |
| Licking Co., Ohio.   | “ “ “ Casts of an individual and a ventral valve.                                                                                 |
| New Providence, Ind. | A somewhat imperfect ventral valve.                                                                                               |
| .....                | See <i>Productella pyxidata</i> .                                                                                                 |

## Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                                                                 | REFERENCE.                                                     |                                      |                         |                       |                                     |
|---------------|------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------|-------------------------|-----------------------|-------------------------------------|
|               |                  |                   |                                                                                                                            | Work.                                                          | Vol.                                 | P.                      | Pl.                   | Figs.                               |
| Keok.         | $\frac{5589}{1}$ | Fig'd.            | <b>Productus</b> Sowerby— <i>Cont.</i><br><i>semireticulatus</i> (Martin)<br>Hall.<br>" St. G. N. Y.<br>H. & C. Pal. N. Y. | Geol. Ia.<br>2<br>8, pt. 1                                     | 1, pt. 2<br>2<br>8, pt. 1            | 638<br>....<br>325      | 19<br>49<br>18        | 3, <i>d. v.</i><br>13, "<br>13, "   |
| "             | "                | "                 | " (Martin) Hall.<br>" St. G. N. Y.<br>H. & C. Pal. N. Y.                                                                   | Geol. Ia.<br>2<br>8, pt. 1                                     | 1, pt. 2<br>2<br>8, pt. 1            | 637<br>....<br>325      | 19<br>49<br>18        | 4a<br>11<br>11                      |
| "             | $\frac{5589}{2}$ | "                 | " " Hall.<br>" St. G. N. Y.<br>H. & C. Pal. N. Y.                                                                          | Geol. Ia.<br>2<br>8, pt. 1                                     | 1, pt. 2<br>2<br>8, pt. 1            | 639<br>....<br>325      | 19<br>49<br>18        | 4 b, c<br>12<br>12                  |
|               |                  |                   | <i>setigerus</i> .....                                                                                                     | .....                                                          | .....                                | .....                   | .....                 | .....                               |
|               |                  |                   | " var. <i>keokuk</i> .....                                                                                                 | .....                                                          | .....                                | .....                   | .....                 | .....                               |
|               |                  |                   | <i>Shumardianus</i> .....                                                                                                  | .....                                                          | .....                                | .....                   | .....                 | .....                               |
| St. L.        | $\frac{5092}{1}$ | Type.             | <i>tenuicostatus</i> .....                                                                                                 | Geol. Ia.<br>" St. G. N. Y.<br>H. & C. Pal. N. Y.              | 1, pt. 2<br>2<br>8, pt. 1            | 675<br>....<br>327      | 24<br>49<br>18        | 2a-d<br>18, <i>prof.</i><br>18, "   |
| Keok.         | $\frac{5093}{1}$ | Type.             | <i>tenuicostus</i> .....                                                                                                   | .....                                                          | .....                                | .....                   | .....                 | .....                               |
|               |                  |                   | <i>vittatus</i> .....                                                                                                      | Geol. Ia.<br>" St. G. N. Y.<br>H. & C. Pal. N. Y.              | 1, pt. 2<br>2<br>8, pt. 1            | 639<br>....<br>327      | 49<br>18              | 15<br>15                            |
| "             | $\frac{5093}{2}$ | "                 | " .....                                                                                                                    | St. G. N. Y.<br>H. & C. Pal. N. Y.                             | 2<br>8, pt. 1                        | ....<br>327             | 49<br>18              | 16, 17<br>16, 17                    |
|               |                  |                   | sp.? cf. <i>Prattenanus</i> .....                                                                                          | " "                                                            | 8, pt. 1                             | ....                    | 18                    | 4                                   |
|               |                  |                   | <b>Ptychospira</b> H. & C.                                                                                                 |                                                                |                                      |                         |                       |                                     |
| Kind.         | $\frac{5094}{1}$ | "                 | <i>sexplicata</i> .....                                                                                                    | W. & W.<br>H. & C. St. G. N. Y.<br>" Pal. N. Y.                | B. S. N. H.<br>13<br>8, pt. 2        | 8<br>....<br>112        | 294<br>....<br>83     | .....<br>36<br>28, <i>v. v.</i> X 2 |
|               |                  |                   | <b>Pugnax</b> Hall & Clarke.                                                                                               |                                                                |                                      |                         |                       |                                     |
| "             | $\frac{5095}{1}$ | Fig'd.            | <i>missouriensis</i> (Shum.) H.                                                                                            | Pal. N. Y.                                                     | 8, pt. 2                             | 204                     | 62                    | 44, 45                              |
| St. L.        | $\frac{5096}{1}$ | Type.             | <i>mutata</i> .....                                                                                                        | Hall.<br>" Geol. Ia.<br>Whitf. A. M. N. H.<br>Hall. Geol. Ind. | T. A. I.<br>4<br>1, pt. 2<br>1<br>12 | 10<br>....<br>52<br>332 | ....<br>23<br>6<br>29 | .....<br>2a, b<br>43-45<br>43-45    |
|               |                  |                   | <b>Retzia</b> King.                                                                                                        |                                                                |                                      |                         |                       |                                     |
|               |                  |                   | <i>sexplicata</i> ..                                                                                                       | .....                                                          | .....                                | .....                   | .....                 | .....                               |
|               |                  |                   | <i>Verneuliana</i> ..                                                                                                      | .....                                                          | .....                                | .....                   | .....                 | .....                               |
|               |                  |                   | <b>Rhipidomella</b> Cehlert.                                                                                               |                                                                |                                      |                         |                       |                                     |
| Burl.         | $\frac{5097}{1}$ | Type.             | <i>burlingtonensis</i> .....                                                                                               | Hall. Geol. Ia.                                                | 1, pt. 2                             | 596                     | 12                    | 4a, b                               |
| St. L.        | $\frac{5098}{1}$ | "                 | <i>dubia</i> .....                                                                                                         | Hall.<br>Whitf. A. M. N. H.<br>Hall. Geol. Ind.                | T. A. I.<br>4<br>1<br>12             | 12<br>45<br>324         | ....<br>6<br>29       | .....<br>1, <i>d. v.</i><br>1, "    |
| "             | $\frac{5098}{2}$ | "                 | " (Hall) .....                                                                                                             | Whitf. A. M. N. H.<br>Hall. Geol. Ind.                         | 1<br>12                              | 45<br>324               | 6<br>29               | 2-4<br>2-4                          |



| LOCALITY.          | REMARKS.                                                                                                                                                                                        |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....              | As type of <i>Productus setigerus</i> Hall.                                                                                                                                                     |
| Keokuk, Ia.        | A crushed, imbedded individual retaining some of the cardinal spines.                                                                                                                           |
| “ “                | External cast of a dorsal valve retaining some shell.                                                                                                                                           |
| .....              | As type of <i>Productus setigerus</i> var. <i>keokuk</i> Hall.                                                                                                                                  |
| Warsaw, Ill.       | Ventral valve, imbedded.                                                                                                                                                                        |
| .....              | See <i>Productus semireticulatus</i> .                                                                                                                                                          |
| .....              | “ “ “                                                                                                                                                                                           |
| .....              | “ <i>Productella Shumardana</i> .                                                                                                                                                               |
| .....              | As <i>Productus tenuicostus</i> .                                                                                                                                                               |
| .....              | “ “ “                                                                                                                                                                                           |
| Milan, Ill.        | An imbedded individual broken apart so as to show both valves.                                                                                                                                  |
| .....              | See <i>Productus tenuicostatus</i> .                                                                                                                                                            |
| Keokuk, Ia.        | An exfoliated ventral valve.                                                                                                                                                                    |
| Warsaw, Ill.       | A well preserved dorsal valve, imb. so as to show the interior. An exfoliated ventral valve from this locality is in the orig. type series.                                                     |
| .....              | See <i>Productus laevicosta</i> .                                                                                                                                                               |
| .....              | As <i>Retzia sexplicata</i> .                                                                                                                                                                   |
| Burlington, Ia.    | An imbedded ventral valve. A broken indiv. which was not figured is also marked as a type. Figs. 22 and 23, pl. 36, 13th Report St. G. N. Y., were not made from one of the original specimens. |
| .....              | Defined as a subgenus of <i>Hypothyris</i> .                                                                                                                                                    |
| Burlington, Ia.    | Internal cast of a large individual from the upper (?) Yellow sandstone.                                                                                                                        |
| .....              | As <i>Rhynconella mutata</i> .                                                                                                                                                                  |
| .....              | “ <i>Rhynchonella</i> “                                                                                                                                                                         |
| .....              | “ “ “                                                                                                                                                                                           |
| Alton, Ill.        | “ “ “ Two individuals. Ten others from this locality are in the original type series.                                                                                                           |
| .....              | See <i>Ptychospira sexplicata</i> .                                                                                                                                                             |
| .....              | “ <i>Eumetria Verneuilliana</i> .                                                                                                                                                               |
| Hannibal, Mo.      | As <i>Orthis Michelina</i> l'Eveille, var. <i>burlingtonensis</i> . Ventral valve, imbedded.                                                                                                    |
| .....              | As <i>Orthis dubia</i> .                                                                                                                                                                        |
| .....              | “ “ “                                                                                                                                                                                           |
| Bloomington, Ind.  | “ “ “ An individual of average size. Two others from this locality are in the original type series.                                                                                             |
| .....              | As <i>Orthis dubia</i> .                                                                                                                                                                        |
| Spergen Hill, Ind. | “ “ “ A rather large individual. Four others from this locality are in the original type series.                                                                                                |

## Class BRACHIOPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                        | REFERENCE.                                          |                          |                       |                       |                                             |
|------------------|------------------|----------------------|---------------------------------------------------|-----------------------------------------------------|--------------------------|-----------------------|-----------------------|---------------------------------------------|
|                  |                  |                      |                                                   | Work.                                               | Vol.                     | P.                    | Pl.                   | Figs.                                       |
|                  |                  |                      | <b>Rhipidomella</b> Ehlert—Cont.                  |                                                     |                          |                       |                       |                                             |
| St. L.           | $\frac{5098}{3}$ | Type.                | dubia.....Hall.                                   | T. A. I.                                            | 4                        | 12                    | ....                  | .....                                       |
| "                | $\frac{5098}{4}$ | Fig'd.               | " (Hall).....Whitf.<br>Hall.                      | A. M. N. H.<br>Geol. Ind.                           | 1<br>12                  | 45<br>324             | 6<br>29               | 5, <i>int. v. v.</i><br>5, "                |
|                  |                  |                      | <b>Rhynchonella</b> Fischer.                      |                                                     |                          |                       |                       |                                             |
|                  |                  |                      | <i>contracta</i> Hall.....                        | .....                                               | .....                    | .....                 | .....                 | .....                                       |
|                  |                  |                      | <i>Grosvenori</i> .....                           | .....                                               | .....                    | .....                 | .....                 | .....                                       |
|                  |                  |                      | <i>macra</i> .....                                | .....                                               | .....                    | .....                 | .....                 | .....                                       |
|                  |                  |                      | <i>mutata</i> .....                               | .....                                               | .....                    | .....                 | .....                 | .....                                       |
| Kind.            | $\frac{5099}{1}$ | Type.                | opposita.....W. & W.                              | B. S. N. H.                                         | 8                        | 294                   | ....                  | .....                                       |
|                  |                  |                      | <i>ricinula</i> .....                             | .....                                               | .....                    | .....                 | .....                 | .....                                       |
|                  |                  |                      | <i>sappho</i> , var.....                          | .....                                               | .....                    | .....                 | .....                 | .....                                       |
|                  |                  |                      | <i>subcuneata</i> .....                           | .....                                               | .....                    | .....                 | .....                 | .....                                       |
|                  |                  |                      | <i>Wortheni</i> .....                             | .....                                               | .....                    | .....                 | .....                 | .....                                       |
|                  |                  |                      | <b>Rhynchotreta</b> Hall.                         |                                                     |                          |                       |                       |                                             |
| St. L.           | $\frac{5100}{1}$ | Type.                | macra.....Hall.<br>Whitf.                         | T. A. I.<br>A. M. N. H.                             | 4<br>1                   | 11<br>52              | ....<br>6             | .....<br>40-42                              |
| "                | $\frac{5101}{1}$ | "                    | ricinula.....Hall.<br>Whitf.<br>Hall.             | Geol. Ind.<br>T. A. I.<br>A. M. N. H.<br>Geol. Ind. | 12<br>4<br>1<br>12       | 334<br>9<br>53<br>330 | 29<br>....<br>6<br>29 | 40-42<br>.....<br>46, <i>d. v.</i><br>46, " |
|                  |                  |                      | <b>Schizophoria</b> King.                         |                                                     |                          |                       |                       |                                             |
| Burl.            | $\frac{5102}{1}$ | "                    | Swallovi.....Hall.                                | Geol. Ia.                                           | 1, pt. 2                 | 597                   | 12                    | 5a, <i>v. v.</i>                            |
| "                | $\frac{5102}{2}$ | "                    | "....."                                           | " "                                                 | 1, pt. 2                 | 597                   | 12                    | 5b, <i>d. v.</i>                            |
|                  |                  |                      | <b>Seminula</b> McCoy (H. & C.)                   |                                                     |                          |                       |                       |                                             |
| St. L.           | $\frac{5103}{1}$ | "                    | trinucleus.....Hall.<br>".....<br>Whitf.<br>Hall. | T. A. I.<br>Geol. Ia.<br>A. M. N. H.<br>Geol. Ind.  | 4<br>1, pt. 2<br>1<br>12 | 7<br>659<br>50<br>329 | ....<br>23<br>6<br>29 | .....<br>4, 5<br>22, 23<br>22, 23           |
| "                | $\frac{5103}{2}$ | "                    | "....."                                           | T. A. I.                                            | 4                        | 7                     | ....                  | .....                                       |
| "                | "                | Fig'd.               | " (Hall) Whitf.<br>Hall.                          | A. M. N. H.<br>Geol. Ind.                           | 1<br>12                  | 50<br>329             | 6<br>29               | 24-27<br>24-27                              |
|                  |                  |                      | <b>Spirifer</b> Sowerby.                          |                                                     |                          |                       |                       |                                             |
| "                | $\frac{5104}{1}$ | Type.                | bifurcatus.....Hall.<br>Whitf.                    | T. A. I.<br>A. M. N. H.                             | 4<br>1                   | 8<br>47               | .....<br>6            | .....<br>13                                 |
| "                | "                | Fig'd.               | " (Hall) Whitf.<br>Hall.                          | Geol. Ind.<br>A. M. N. H.<br>Geol. Ind.             | 12<br>1<br>12            | 326<br>47<br>326      | 29<br>6<br>29         | 13<br>14, 15<br>14 15                       |
| Kind.            | $\frac{5105}{1}$ | Type.                | biplicatus.....Hall.                              | Geol. Ia.                                           | 1, pt. 2                 | 519                   | 7                     | 5b                                          |
| Kind.            | $\frac{5106}{1}$ | Fig'd.               | <i>Carteri</i> .....<br>centronatus (Winchell) H. | .....<br>Geol. Ia.                                  | .....<br>1, pt. 2        | .....<br>519          | .....<br>7            | .....<br>5a                                 |
|                  |                  |                      | <i>extenuatus</i> .....                           | .....                                               | .....                    | .....                 | .....                 | .....                                       |



| LOCALITY.            | REMARKS.                                                                                                                               |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Alton, Ill.          | As <i>Orthis dubia</i> . Ten individuals from this locality are in the original type series.                                           |
| Paynter's Hill, Ind. | As <i>Orthis dubia</i> .<br>" " " A large silicified ventral valve. Not one of the original series.                                    |
| .....                | See <i>Camarotoechia contracta</i> .                                                                                                   |
| .....                | " <i>Wilsonia Grosvenori</i> .                                                                                                         |
| .....                | " <i>Rhynchotrete macra</i> .                                                                                                          |
| .....                | " <i>Pugnax mutata</i> .                                                                                                               |
| Burlington, Ia.      | An individual with dorsal valve, somewhat broken. From the limestone.                                                                  |
| .....                | See <i>Rhynchotrete ricinula</i> .                                                                                                     |
| .....                | " <i>Camarotoechia sappho</i> , var.                                                                                                   |
| .....                | " <i>Camarophoria subcuneata</i> .                                                                                                     |
| .....                | " " <i>Wortheni</i> .                                                                                                                  |
| .....                | As <i>Rhynconella macra</i> .                                                                                                          |
| .....                | " <i>Rhynchonella</i> "                                                                                                                |
| Alton, Ill.          | " " " An entire individual, large for the species.                                                                                     |
| .....                | " <i>Rhynconella ricinula</i> .                                                                                                        |
| .....                | " <i>Rhynchonella</i> "                                                                                                                |
| Spergen Hill, Ind.   | " " " An entire individual. Five others from this locality are in the original type series.                                            |
| Burlington, Ia.      | As <i>Orthis Swallovi</i> . Large ventral valve, imbedded.                                                                             |
| Quincy, Ill.         | " " " Large dorsal valve, imbedded.                                                                                                    |
| .....                | As <i>Terebratula trinuclea</i> .                                                                                                      |
| .....                | " " "                                                                                                                                  |
| .....                | " <i>Athyris trinucleus</i> .                                                                                                          |
| Bloomington, Ind.    | " " " Two entire individuals. Eight others from this locality are in the original type series.                                         |
| Spergen Hill, Ind.   | As <i>Terebratula trinuclea</i> . Three individuals from this locality are in the original type series.                                |
| .....                | As <i>Athyris trinucleus</i> .                                                                                                         |
| Spergen Hill, Ind.   | " " " A large, entire indiv. Not one of the orig. series.                                                                              |
| " "                  | An individual.                                                                                                                         |
| " "                  | Two individuals which were not in the original series. Fig. 14 is an enlargement to 4 diams.                                           |
| Burlington, Ia.      | Cast of a dorsal valve. See also <i>Spirifer centronatus</i> .                                                                         |
| .....                | See <i>Syringothyris Carteri</i> .                                                                                                     |
| Burlington, Ia.      | As a type of <i>Spirifer biplicatus</i> Hall. Cast of a dorsal valve, from the upper Yellow sandstone. Not from the Oölitic limestone. |
| .....                | See <i>Syringothyris extenuata</i> .                                                                                                   |

## Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.    | REFERENCE.   |          |      |      |                |
|---------------|------------------|-------------------|-------------------------------|--------------|----------|------|------|----------------|
|               |                  |                   |                               | Work.        | Vol.     | P.   | Pl.  | Figs.          |
|               |                  |                   | <b>Spirifer Sowerby—Cont.</b> |              |          |      |      |                |
| Burl.         | $\frac{5107}{1}$ | Fig'd.            | Forbesi (N. & P.)...Hall.     | Geol. Ia.    | I, pt. 2 | 600  | 13   | I, v. v.       |
| "             | $\frac{5108}{1}$ | Type.             | Grimesi .....Hall.            | " "          | I, pt. 2 | 604  | 14   | 3, int. v. v.  |
|               |                  |                   | " .....H. & C.                | St. G. N. Y. | 2        | .... | 56   | 17, "          |
| "             | $\frac{5108}{2}$ | "                 | " .....Hall.                  | Pal. N. Y.   | 8, pt. 2 | 38   | 31   | 17, "          |
| "             | $\frac{5108}{1}$ | "                 | " .....H. & C.                | Geol. Ia.    | I, pt. 2 | 604  | 14   | 4, "           |
| "             | $\frac{5108}{1}$ | "                 | " .....H. & C.                | " "          | I, pt. 2 | 604  | 14   | 5, "           |
| "             | $\frac{5108}{3}$ | "                 | " .....H. & C.                | St. G. N. Y. | 2        | .... | 56   | 18, int. v. v. |
| "             | $\frac{5108}{1}$ | "                 | " .....H. & C.                | Pal. N. Y.   | 8, pt. 2 | 38   | 31   | 18, "          |
| "             | $\frac{5108}{1}$ | "                 | " .....Hall.                  | St. G. N. Y. | 2        | ..   | 56   | 19, enl.       |
| "             | $\frac{5108}{1}$ | "                 | " .....H. & C.                | Pal. N. Y.   | 8, pt. 2 | 38   | 31   | 19, "          |
| Kind.         | $\frac{5109}{1}$ | "                 | hirtus.....W. & W.            | B. S. N. H.  | 8        | 293  | .... | ....           |
| Burl.         | $\frac{5110}{1}$ | "                 | imbrex.....Hall.              | Geol. Ia.    | I, pt. 2 | 601  | 13   | 2, d. v.       |
| "             | $\frac{5110}{1}$ | "                 | " .....H. & C.                | St. G. N. Y. | 2        | .... | 56   | 11, "          |
| "             | $\frac{5110}{1}$ | "                 | " .....H. & C.                | " "          | 13       | .... | 27   | 1, "           |
| "             | $\frac{5111}{1}$ | "                 | incertus.....Hall.            | Pal. N. Y.   | 8, pt. 2 | 38   | 31   | 11, "          |
| Chest.        | $\frac{5112}{1}$ | "                 | increbescens.....Hall.        | Geol. Ia.    | I, pt. 2 | 602  | 13   | 3, card.       |
|               |                  |                   | " .....H. & C.                | " "          | I, pt. 2 | 706  | 27   | 6a-c, i.       |
|               |                  |                   | " .....H. & C.                | St. G. N. Y. | 2        | .... | 55   | 29, 30         |
|               |                  |                   | " .....H. & C.                | " "          | 13       | .... | 56   | 3              |
|               |                  |                   | " .....H. & C.                | " "          | 13       | .... | 27   | 8, 10          |
|               |                  |                   | " .....H. & C.                | Pal. N. Y.   | 8, pt. 2 | 27   | 30   | 29, 30         |
|               |                  |                   | " .....H. & C.                | " "          | 13       | .... | 31   | 3              |
| "             | "                | "                 | " .....Hall.                  | Geol. Ia.    | I, pt. 2 | 706  | 27   | 6d, d. v.      |
| "             | "                | "                 | " .....H. & C.                | " "          | I, pt. 2 | 706  | 27   | 6e, f          |
| "             | "                | "                 | " .....H. & C.                | St. G. N. Y. | 2        | .... | 55   | 27, 28         |
| "             | "                | "                 | " .....H. & C.                | " "          | 13       | .... | 27   | 11, d. v.      |
| "             | "                | "                 | " .....Hall.                  | Pal. N. Y.   | 8, pt. 2 | 27   | 30   | 27, 28         |
| "             | "                | "                 | " .....Hall.                  | Geol. Ia.    | I, pt. 2 | 706  | 27   | 6g, h          |
| "             | "                | "                 | " .....H. & C.                | St. G. N. Y. | 2        | .... | 56   | 1, int. v. v.  |
| "             | "                | "                 | " .....H. & C.                | " "          | 13       | .... | 27   | 9, "           |
| "             | "                | "                 | " .....Hall.                  | Pal. N. Y.   | 8, pt. 2 | 27   | 31   | 1, "           |
| Keok.         | $\frac{5113}{1}$ | "                 | keokuk.....Hall.              | Geol. Ia.    | I, pt. 2 | 642  | 20   | 3a, b, d, 2d   |
| "             | $\frac{5113}{1}$ | "                 | " .....H. & C.                | St. G. N. Y. | 2        | .... | 55   | 21, 22         |
| "             | $\frac{5113}{1}$ | "                 | " .....H. & C.                | " "          | 13       | .... | 27   | 14, 15         |
| "             | $\frac{5113}{1}$ | "                 | " .....Hall.                  | Pal. N. Y.   | 8, pt. 2 | 27   | 30   | 21, 22         |
| "             | $\frac{5113}{2}$ | "                 | " .....Hall.                  | Geol. Ia.    | I, pt. 2 | 642  | 20   | 3c, prof.      |
| St. L.        | $\frac{5113}{2}$ | "                 | " .....H. & C.                | St. G. N. Y. | 2        | .... | 55   | 23, d. v.      |
| "             | $\frac{5113}{2}$ | "                 | " .....H. & C.                | Pal. N. Y.   | 8, pt. 2 | 27   | 30   | 22, "          |
| "             | $\frac{5113}{2}$ | "                 | " .....Hall.                  | Geol. Ia.    | I, pt. 2 | 676  | 24   | 4a-d           |
| Wars.         | $\frac{5114}{1}$ | "                 | lateralis.....Hall.           | St. G. N. Y. | 2        | .... | 57   | 1-3            |
| "             | $\frac{5114}{1}$ | "                 | " .....H. & C.                | Pal. N. Y.   | 8, pt. 2 | 26   | 32   | 1-3            |
| Keok.         | $\frac{5115}{1}$ | Type.             | Logani.....Hall.              | Geol. Ia.    | I, pt. 2 | 647  | 20   | 7, prof.       |
| "             | $\frac{5115}{1}$ | "                 | " .....H. & C.                | " "          | I, pt. 2 | 647  | 21   | 1a, b          |
| "             | $\frac{5115}{2}$ | "                 | " .....H. & C.                | " "          | I, pt. 2 | 647  | 21   | 2              |
| "             | $\frac{5115}{2}$ | "                 | " .....H. & C.                | St. G. N. Y. | 2        | .... | 57   | 8, int.        |
| "             | $\frac{5115}{2}$ | "                 | " .....H. & C.                | Pal. N. Y.   | 8, pt. 2 | 25   | 32   | 8, "           |
| Kind.         | $\frac{5116}{1}$ | Fig'd.            | marionensis (Shum.) Hall.     | Geol. Ia.    | I, pt. 2 | 511  | 6    | 1a-c           |
| "             | $\frac{5116}{1}$ | "                 | " .....H. & C.                | St. G. N. Y. | 2        | .... | 56   | 15, d. v.      |
| "             | $\frac{5116}{1}$ | "                 | " .....H. & C.                | " "          | 13       | 757  | 27   | 3, "           |
| "             | $\frac{5116}{1}$ | "                 | " .....H. & C.                | Pal. N. Y.   | 8, pt. 2 | 26   | 31   | 15, "          |



| LOCALITY.                            | REMARKS.                                                                                                                                                                                                            |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Burlington, Ia.                      | A ventral valve, imbedded ; not quite entire.                                                                                                                                                                       |
| “ “                                  | The middle portion of a ventral valve.                                                                                                                                                                              |
| Near Mason’s Land-<br>ing, Missouri. | Internal cast of a ventral valve retaining a considerable fragment of<br>shell. Locality was opposite the mouth of the Illinois river.                                                                              |
| Burlington, Ia.                      | Internal cast of a ventral valve retaining a fragment of shell.                                                                                                                                                     |
| Ste. Genevieve, Mo.                  | Internal cast of a very transverse ventral valve, imbedded. Cnf.<br><i>Spirifer Logani</i> .                                                                                                                        |
| Burlington?, Ia.                     | A large, somewhat exfoliated dorsal valve, imbedded.                                                                                                                                                                |
| Burlington, Ia.                      | Casts of two ventral valves imbed. together and another imbed. with<br>a type of <i>Macrodon parvus</i> W. & W. Is <i>Reticularia cooperensis</i><br>Swallow, according to Schuchert, Syn Am. Foss. Brach., p. 342. |
| “ “                                  | A dorsal valve, imbedded. Probably = <i>Spirifer subæqualis</i> Hall.                                                                                                                                               |
| “ “                                  | Silicified individual, imbedded. Prob. = <i>Spirifer lateralis</i> Hall.                                                                                                                                            |
| Chester, Ill.                        | An entire individual. The enlargement of the cardinal area was<br>completed from other specimens.                                                                                                                   |
| “ “                                  | A large, entire individual.                                                                                                                                                                                         |
| “ “                                  | A large, gibbous individual.                                                                                                                                                                                        |
| “ “                                  | Three ventral valves, somewhat fragmentary.                                                                                                                                                                         |
| Keokuk, Ia.                          | An individual and an imbedded ventral valve.                                                                                                                                                                        |
| “ “                                  | A small, gibbous individual, somewhat exfoliated.                                                                                                                                                                   |
| Webster Co., Ia.                     | A small individual from Lizard Creek. Formation is given incorrectly<br>in the reference.                                                                                                                           |
| “ “                                  | An entire individual and a ventral valve from Lizard Creek.                                                                                                                                                         |
| .....                                | As <i>Spirifera lateralis</i> ?                                                                                                                                                                                     |
| Ste. Genevieve, Mo.                  | A silicified individual.                                                                                                                                                                                            |
| Nauvoo, Ill.                         | A large individual, nearly entire. The area did not show when the<br>figure was made, but it has been cleaned out since.                                                                                            |
| “ “                                  | A large ventral valve, imbedded.                                                                                                                                                                                    |
| Near Nauvoo, Ill.                    | Card. and umbonal part of vent. valve with cast of int. of whole valve.                                                                                                                                             |
| Louisiana, Mo.                       | A nearly entire individual.                                                                                                                                                                                         |

Class BRACHIOPODA—*Continued.*

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                    | REFERENCE.   |          |       |       |                       |
|---------------|------------------|-------------------|-----------------------------------------------|--------------|----------|-------|-------|-----------------------|
|               |                  |                   |                                               | Work.        | Vol.     | P.    | Pl.   | Figs.                 |
|               |                  |                   | <b>Spirifer</b> Sowerby— <i>Cont.</i>         |              |          |       |       |                       |
| Keok.         | $\frac{5117}{1}$ | Type.             | <i>neglectus</i> ..... <i>Hall.</i>           | Geol. Ia.    | I, pt. 2 | 643   | 20    | 5, <i>d. v.</i>       |
| Burl.         | $\frac{5118}{1}$ | Type.             | <i>Norwoodana</i> ..... <i>Hall.</i>          | Geol. Ia.    | I, pt. 2 | 603   | 13    | 4b, e                 |
| "             | $\frac{5118}{2}$ | "                 | " ..... <i>H. &amp; C.</i>                    | St. G. N. Y. | II       | 176   | ....  | 95, <i>enl.</i>       |
|               |                  |                   | " ..... <i>H. &amp; C.</i>                    | Pal. N. Y.   | 8, pt. 2 | 39    | 37    | 32, "                 |
| Keok.         | $\frac{5119}{1}$ | "                 | <i>pseudolineatus</i> ..... <i>Hall.</i>      | St. G. N. Y. | 2        | ....  | 61    | 28-30                 |
|               |                  |                   | " ..... <i>H. &amp; C.</i>                    | " "          | 13       | ....  | 25    | 15, <i>d. v.</i>      |
|               |                  |                   | " ..... <i>H. &amp; C.</i>                    | Pal. N. Y.   | 8, pt. 2 | 21    | 36    | 28-30                 |
|               |                  |                   | <i>spinosus</i> .....                         | .....        | .....    | ..... | ..... | .....                 |
| Kind.         | $\frac{5120}{1}$ | Type.             | <i>subrotundatus</i> ..... <i>Hall.</i>       | Geol. Ia.    | I, pt. 2 | 521   | 7     | 8a, <i>d. v.</i>      |
| Wars.?        | $\frac{5121}{1}$ | "                 | <i>tenuicostatus</i> ..... <i>Hall.</i>       | " "          | I, pt. 2 | 662   | 23    | 8a, c                 |
| " ?           | $\frac{5121}{2}$ | "                 | " ..... "                                     | " "          | I, pt. 2 | 662   | 23    | 8b, <i>v. v.</i>      |
|               |                  |                   | <i>transversa</i> .....                       | .....        | .....    | ..... | ..... | .....                 |
|               |                  |                   | " ..... <i>H. (non McC.)</i>                  | .....        | .....    | ..... | ..... | .....                 |
|               |                  |                   | <b>Spiriferina</b> d'Orbigny.                 |              |          |       |       |                       |
| St. L.        | $\frac{5122}{1}$ | Type.             | <i>Norwoodana</i> ..... <i>Hall.</i>          | T. A. I.     | 4        | 7     | ....  | .....                 |
|               |                  |                   | " ..... <i>Whitf. Hall.</i>                   | A. M. N. H.  | I        | 48    | 6     | 16, 17                |
| "             | $\frac{5122}{2}$ | "                 | " ..... "                                     | Geol. Ind.   | 12       | 327   | 29    | 16, 17                |
| "             | $\frac{5122}{3}$ | "                 | " ..... "                                     | T. A. I.     | 4        | 7     | ....  | .....                 |
|               |                  |                   | " ..... "                                     | " "          | 4        | 7     | ....  | .....                 |
| Chest.        | $\frac{5123}{1}$ | Fig'd.            | <i>spinosa (N. &amp; P.)</i> .. <i>Hall.</i>  | Geol. Ia.    | I, pt. 2 | 706   | 27    | 5a-c                  |
|               |                  |                   | " ..... <i>H. &amp; C.</i>                    | St. G. N. Y. | 2        | ....  | 60    | 26-29                 |
|               |                  |                   | " ..... <i>H. &amp; C.</i>                    | " "          | 13       | ....  | 31    | 4-7                   |
|               |                  |                   | " ..... <i>H. &amp; C.</i>                    | Pal. N. Y.   | 8, pt. 2 | 54    | 35    | 26-29                 |
| Keok.         | $\frac{5124}{1}$ | "                 | <i>subelliptica (McChes.)</i> <i>H.</i>       | St. G. N. Y. | 2        | ....  | 60    | 21, <i>int. v. v.</i> |
|               |                  |                   | " ..... <i>H. &amp; C.</i>                    | Pal. N. Y.   | 8, pt. 2 | 54    | 35    | 21, "                 |
| "             | "                | "                 | " ..... <i>Hall.</i>                          | St. G. N. Y. | 2        | ....  | 60    | 22, <i>int.</i>       |
|               |                  |                   | " ..... <i>H. &amp; C.</i>                    | " "          | 13       | ....  | 31    | 2, "                  |
|               |                  |                   | " ..... <i>H. &amp; C.</i>                    | Pal. N. Y.   | 8, pt. 2 | 54    | 35    | 22, "                 |
| Chest.        | $\frac{5125}{1}$ | "                 | <i>transversa (McChesney)</i> <i>H.</i>       | St. G. N. Y. | 2        | ....  | 60    | 19, <i>d. v.</i>      |
|               |                  |                   | " ..... <i>H. &amp; C.</i>                    | " "          | 13       | ....  | 31    | 1, "                  |
|               |                  |                   | " ..... <i>H. &amp; C.</i>                    | Pal. N. Y.   | 8, pt. 2 | 54    | 35    | 19, "                 |
|               |                  |                   | <i>Spirigera</i> d'Orbigny .....              | .....        | .....    | ..... | ..... | .....                 |
|               |                  |                   | <i>hirsuta</i> .....                          | .....        | .....    | ..... | ..... | .....                 |
|               |                  |                   | <b>Streptorhynchus</b> King.                  |              |          |       |       |                       |
|               |                  |                   | <i>æquivalvis</i> .....                       | .....        | .....    | ..... | ..... | .....                 |
|               |                  |                   | <i>keokuk</i> .....                           | .....        | .....    | ..... | ..... | .....                 |
|               |                  |                   | <b>Syringothyris</b> A. Winchell.             |              |          |       |       |                       |
| Wav.          | $\frac{5126}{1}$ | Type.             | <i>Carteri</i> ..... <i>Hall.</i>             | N. Y. S. M.  | 10       | 170   | ...   | .....                 |
| Kind.         | $\frac{5127}{1}$ | "                 | <i>extenuata</i> ..... <i>Hall.</i>           | Geol. Ia.    | I, pt. 2 | 520   | 7     | 6, <i>d. v.</i>       |
| Keok.         | $\frac{5128}{1}$ | "                 | <i>subcuspidata (H.)</i> <i>H. &amp; C.</i>   | St. G. N. Y. | 13       | ....  | 30    | 3, <i>int. v. v.</i>  |
|               |                  |                   | " ..... <i>H. &amp; C.</i>                    | Pal. N. Y.   | 8, pt. 2 | 50    | 26    | 11, "                 |
| "             | $\frac{5129}{1}$ | "                 | <i>texta (Hall)</i> ..... <i>H. &amp; C.</i>  | St. G. N. Y. | 13       | ....  | 30    | 5, <i>int.</i>        |
|               |                  |                   | " ..... <i>H. &amp; C.</i>                    | Pal. N. Y.   | 8, pt. 2 | 48    | 26    | 9, "                  |
| Burl.         | $\frac{5130}{1}$ | Fig'd.            | <i>typus (Winchell)</i> .. <i>H. &amp; C.</i> | St. G. N. Y. | 13       | 760   | 30    | 2, "                  |
|               |                  |                   | " ..... <i>H. &amp; C.</i>                    | Pal. N. Y.   | 8, pt. 2 | 48    | 26    | 10, "                 |
|               |                  |                   | <b>Terebratula</b> Llhwyd.                    |              |          |       |       |                       |
|               |                  |                   | <i>formosa</i> .....                          | .....        | .....    | ..... | ..... | .....                 |
|               |                  |                   | <i>trinuclea</i> .....                        | .....        | .....    | ..... | ..... | .....                 |
|               |                  |                   | <i>turgida</i> .....                          | .....        | .....    | ..... | ..... | .....                 |



| LOCALITY.             | REMARKS.                                                                                                                                                                                                   |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Keokuk, Ia.           | A vertically crushed individual.                                                                                                                                                                           |
| .....                 | See <i>Spiriferina Norwoodana</i> .                                                                                                                                                                        |
| Quincy, Ill.          | The silicified umbonal portion of a ventral valve and a nearly entire, somewhat exfoliated individual.                                                                                                     |
| Burlington, Ia.       | Cherty cast of the papillose inner surface of a dorsal valve.                                                                                                                                              |
| Near Nauvoo, Ill.     | A large, partly exfoliated individual. Not one of the original series.<br>Fig. 30 was combined from this and other specimens.                                                                              |
| .....                 | See <i>Spiriferina spinosa</i> .                                                                                                                                                                           |
| Burlington, Ia.       | Cast of a dorsal valve, imbedded.                                                                                                                                                                          |
| Dallas, Ill.          | A silicified individual. St. Louis group?                                                                                                                                                                  |
| Warsaw, Ill.          | A ventral valve, imbedded. St. Louis group?                                                                                                                                                                |
| .....                 | See <i>Spiriferina transversa</i> .                                                                                                                                                                        |
| .....                 | " " <i>subelliptica</i> .                                                                                                                                                                                  |
| .....                 | As <i>Spirifer Norwoodana</i> .                                                                                                                                                                            |
| .....                 | " <i>Spirifera</i> " in expl. pl., by error.                                                                                                                                                               |
| Alton, Ill.           | A large individual and another which was not figured.                                                                                                                                                      |
| Spergen Hill, Ind.    | As <i>Spirifer Norwoodana</i> . Two individuals.                                                                                                                                                           |
| Bloomington, Ind.     | " " " An individual.                                                                                                                                                                                       |
| .....                 | As <i>Spirifer spinosus</i> .                                                                                                                                                                              |
| Chester, Ill.         | A large, entire individual and one which has been split to show the septum.                                                                                                                                |
| .....                 | As <i>Spirifera transversa</i> McChesney.                                                                                                                                                                  |
| New Providence, Ind.  | Middle portion of a ventral valve.                                                                                                                                                                         |
| .....                 | As <i>Spirifera transversa</i> McChesney.                                                                                                                                                                  |
| New Providence, Ind.  | Middle portion of a ventral valve. Figs. are enlargements to 2 diams.                                                                                                                                      |
| .....                 | As <i>Spirifera transversa</i> .                                                                                                                                                                           |
| Buzzard's Roost, Ala. | An entire individual, silicified.                                                                                                                                                                          |
| .....                 | Synonym of <i>Athyris</i> .                                                                                                                                                                                |
| .....                 | See <i>Cleiothyris hirsuta</i> .                                                                                                                                                                           |
| .....                 | " <i>Orthotheses inæqualis</i> .                                                                                                                                                                           |
| .....                 | " <i>Derbya keokuk</i> .                                                                                                                                                                                   |
| Licking Co., Ohio.    | As <i>Spirifer Carteri</i> . A series consisting of three somewhat crushed casts of individuals, the cast of a dorsal valve and the imprint of another dorsal valve, apparently the types of this species. |
| Burlington, Ia.       | As <i>Spirifer extenuatus</i> . Cast of a dorsal valve.                                                                                                                                                    |
| Nauvoo, Ill.          | A partly silicified ventral valve.                                                                                                                                                                         |
| New Providence, Ind.  | Internal cast of an individual.                                                                                                                                                                            |
| Burlington, Ia.       | Silicified umbonal portion of a ventral valve.                                                                                                                                                             |
| .....                 | See <i>Dielasma formosum</i> .                                                                                                                                                                             |
| .....                 | " <i>Seminula trinucleus</i> .                                                                                                                                                                             |
| .....                 | " <i>Dielasma turgidum</i> .                                                                                                                                                                               |

Class BRACHIOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS. SPECIES AND AUTHOR. | REFERENCE.  |      |     |       |       |
|---------------|------------------|-------------------|----------------------------|-------------|------|-----|-------|-------|
|               |                  |                   |                            | Work.       | Vol. | P.  | Pl.   | Figs. |
| St. L.        | $\frac{5131}{1}$ | Type.             | <b>Wilsonia</b> Kayser.    |             |      |     |       |       |
|               |                  |                   | Grosvenori.....Hall.       | T. A. I.    | 4    | 10  | ..... | ..... |
|               |                  |                   | Whitf.                     | A. M. N. H. | 1    | 53  | 6     | 31-34 |
|               |                  |                   | Hall.                      | Geol. Ind.  | 12   | 331 | 29    | 31-34 |
| "             | $\frac{5131}{2}$ | "                 | " .....                    | T. A. I.    | 4    | 10  | ..... | ..... |
| "             | $\frac{5131}{3}$ | "                 | " .....                    | " "         | 4    | 10  | ..... | ..... |

Subkingdom MOLLUSCA.

|        |                  |        |                                      |              |          |       |       |          |
|--------|------------------|--------|--------------------------------------|--------------|----------|-------|-------|----------|
| Wav.   | $\frac{5132}{1}$ | Fig'd. | <b>Aviculopecten</b> McCoy.          |              |          |       |       |          |
|        |                  |        | Caroli ( <i>A. Winchell</i> ) Hall.  | Pal. N. Y.   | 5, pt. 1 | 29    | 9     | 5        |
| Kind.  | $\frac{5133}{1}$ | Type.  | limaformis.....                      |              |          |       |       |          |
|        |                  |        | nodocostatus... <i>W. &amp; W.</i>   | B. S. N. H.  | 8        | 296   | ..... | .....    |
|        |                  |        | <b>Cardiomorpha</b> de Koninck.      |              |          |       |       |          |
|        |                  |        | ovata .....                          | .....        | .....    | ..... | ..... | .....    |
| Kind.  | $\frac{5134}{1}$ | Fig'd. | <b>Cardiopsis</b> M. & W.            |              |          |       |       |          |
|        |                  |        | radiata ( <i>M. &amp; W.</i> ) Hall. | N. Y. S. M.  | 13       | 110   | ..... | .....    |
|        |                  |        | "                                    | Pal. N. Y.   | 5, pt. 1 | 433   | 70    | 25       |
| St. L. | $\frac{5135}{1}$ | Type.  | <b>Conocardium</b> Bronn.            |              |          |       |       |          |
|        |                  |        | carinatum ..... Hall.                | T. A. I.     | 4        | 14    |       |          |
|        |                  |        | Whitf.                               | A. M. N. H.  | 1        | 59    | 7     | 18, 19   |
|        |                  |        | Hall.                                | Geol. Ind.   | 12       | 345   | 30    | 18, 19   |
| "      | $\frac{5135}{2}$ | "      | " .....                              | T. A. I.     | 4        | 14    | ..... | .....    |
| "      | $\frac{5136}{1}$ | "      | catastomum..... Hall.                | " "          | 4        | 13    |       |          |
|        |                  |        | Whitf.                               | A. M. N. H.  | 1        | 58    | 7     | 15-17    |
|        |                  |        | Hall.                                | Geol. Ind.   | 12       | 344   | 30    | 15-17    |
| "      | $\frac{5137}{1}$ | "      | cuneatum..... Whitf.                 | A. M. N. H.  | 1        | 60    | 7     | 24, 25   |
|        |                  |        | Hall.                                | Geol. Ind.   | 12       | 345   | 30    | 24, 25   |
| "      | $\frac{5137}{2}$ | "      | " .....                              | A. M. N. H.  | 1        | 60    | 7     | 26       |
|        |                  |        | Whitf.                               | Geol. Ind.   | 12       | 345   | 30    | 26       |
| "      | $\frac{5138}{1}$ | "      | Meek anum ..... Hall.                | T. A. I.     | 4        | 15    |       |          |
|        |                  |        | Whitf.                               | A. M. N. H.  | 1        | 61    | 7     | 21-23    |
|        |                  |        | Hall.                                | Geol. Ind.   | 12       | 347   | 30    | 21-23    |
| "      | $\frac{5139}{1}$ | "      | Pratten anum..... Hall.              | T. A. I.     | 4        | 15    |       |          |
|        |                  |        | Whitf.                               | A. M. N. H.  | 1        | 61    | 7     | 20       |
|        |                  |        | Hall.                                | Geol. Ind.   | 12       | 346   | 30    | 20       |
| Wav.   | $\frac{5140}{1}$ | Fig'd. | <b>Crenipecten</b> Hall.             |              |          |       |       |          |
|        |                  |        | Winchelli ( <i>Meek</i> )... Hall.   | St. G. N. Y. | 1        | ..... | 1     | 4, 5     |
|        |                  |        | "                                    | Pal. N. Y.   | 5, pt. 1 | 89    | 9     | 25-28    |
| "      | "                | "      | " " ... "                            | " "          | 5, pt. 1 | 89    | 9     | 1, 2, 4, |
| St. L. | $\frac{5141}{1}$ | Type.  | <b>Cypricardella</b> Hall.           |              |          |       |       |          |
|        |                  |        | elliptica ..... Whitf.               | A. M. N. H.  | 1        | 65    | ..... | .....    |
|        |                  |        | "                                    | " "          | 1        | ..... | 7     | 37       |
|        |                  |        | Hall.                                | Geol. Ind.   | 12       | ..... | 30    | 37       |





Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                                                      | REFERENCE.                                         |                                  |                                  |                                  |                                  |
|---------------|------------------|--------------------|-------------------------------------------------------------------------------------------------|----------------------------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
|               |                  |                    |                                                                                                 | Work.                                              | Vol.                             | P.                               | Pl.                              | Figs.                            |
| St. L.        | <u>5142</u><br>1 | Type.              | <b>Cypricardella</b> Hall— <i>Cont.</i><br>nucleata.....Hall.<br>Whitf.<br>Hall.                | T. A. I.<br>A. M. N. H.<br>Geol. Ind.              | 4<br>1<br>12                     | 17<br>64<br>339                  | 7<br>30                          | 35, 36<br>35, 36                 |
| "             | <u>5143</u><br>1 | "                  | oblonga ... ..Hall.<br>Whitf.<br>Hall.                                                          | T. A. I.<br>A. M. N. H.<br>Geol. Ind.              | 4<br>1<br>12                     | 18<br>65<br>340                  | 7<br>30                          | 32<br>32                         |
| "             | <u>5143</u><br>2 | "                  | " ..... "<br>" ..... "<br>Whitf.<br>Hall.                                                       | T. A. I.<br>Geol. Ia.<br>A. M. N. H.<br>Geol. Ind. | 4<br>1, pt. 2<br>1<br>12         | 18<br>.....<br>65<br>340         | 23<br>7<br>30                    | 10a-d<br>30, 31<br>30, 31        |
| "             | "                | Fig'd.             | " (Hall) ... Whitf.<br>" ..... Hall.                                                            | A. M. N. H.<br>Geol. Ind.                          | 1<br>12                          | 65<br>340                        | 7<br>30                          | 33, 34<br>33, 34                 |
| Kind.         | <u>5144</u><br>1 | Type.              | <i>plicata</i> .....                                                                            | .....                                              | .....                            | .....                            | .....                            | .....                            |
| Wav.          | <u>5145</u><br>1 | "                  | quadrata.....W. & W.<br>reservata .....H. & W.<br>Hall.                                         | B. S. N. H.<br>P. N. L. S.<br>Pal. N. Y.           | 8<br>pt. 2<br>5, pt. 1           | 300<br>33<br>312                 | .....<br>.....<br>74             | .....<br>.....<br>11-13          |
| St. L.        | <u>5146</u><br>1 | Gen. and Sp. Type. | subelliptica.....Hall.<br>" ..... "<br>Whitf.<br>Hall.                                          | T. A. I.<br>Geol. Ia.<br>A. M. N. H.<br>Geol. Ind. | 4<br>1, pt. 2<br>1<br>12         | 17<br>664<br>64<br>339           | 23<br>23<br>7<br>30              | 11, 12<br>28<br>28               |
| "             | "                | "                  | " (Hall) Whitf.<br>Hall.                                                                        | A. M. N. H.<br>Geol. Ind.                          | 1<br>12                          | 64<br>339                        | 7<br>30                          | 27-29<br>27-29                   |
| "             | <u>5146</u><br>2 | "                  | " ..... "<br>" ..... "                                                                          | T. A. I.                                           | 4                                | 17                               | .....                            | .....                            |
|               |                  |                    | <b>Cypricardia</b> Lamarck.<br><i>indianensis</i> .....<br><i>subplana</i> .....                | .....<br>.....<br>.....                            | .....<br>.....<br>.....          | .....<br>.....<br>.....          | .....<br>.....<br>.....          | .....<br>.....<br>.....          |
| Wav.          | <u>5147</u><br>1 | Type.              | <b>Cypricardinia</b> Hall.<br>consimilis.....Hall.<br>" ..... "                                 | Pal. N. Y.<br>" "                                  | 5, pt. 1<br>5, pt. 1,<br>Pl.&Ex. | 486<br>.....                     | 79<br>79                         | 19-21<br>19-21                   |
| St. L.        | <u>5148</u><br>1 | Type.              | <i>indenta</i> Hall (non Con.)<br><i>indianensis</i> .....Hall.<br>Whitf.<br>Hall.              | T. A. I.<br>A. M. N. H.<br>Geol. Ind.              | 4<br>1<br>12                     | 18<br>58<br>342                  | .....<br>7<br>30                 | .....<br>14<br>14                |
| "             | <u>5148</u><br>2 | "                  | " ..... "                                                                                       | T. A. I.                                           | 4                                | 18                               | .....                            | .....                            |
| "             | <u>5148</u><br>3 | "                  | " ..... "                                                                                       | " "                                                | 4                                | 18                               | .....                            | .....                            |
| "             | <u>5148</u><br>2 | Fig'd.             | " (Hall) Whitf.<br>Hall.                                                                        | A. M. N. H.<br>Geol. Ind.                          | 1<br>12                          | 58<br>342                        | 7<br>30                          | 10-13<br>10-13                   |
| Kind.         | <u>5149</u><br>1 | "                  | sulcifera (A. Winch.) Hall                                                                      | Pal. N. Y.<br>" "                                  | 5, pt. 1,<br>Pl.&Ex.<br>5, pt. 1 | .....<br>487                     | 79<br>79                         | 22<br>22                         |
|               |                  |                    | <b>Cytherodon</b> H. & W.<br><i>cuneus</i> .....<br><i>quadrangularis</i> Hall<br>(non H. & W.) | .....<br>.....<br>.....<br>.....                   | .....<br>.....<br>.....<br>..... | .....<br>.....<br>.....<br>..... | .....<br>.....<br>.....<br>..... | .....<br>.....<br>.....<br>..... |



| LOCALITY.                   | REMARKS.                                                                                                                                                                                                                                                                                                         |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....<br>Spergen Hill, Ind. | As <i>Microdon</i> ( <i>Cypricardella</i> ) <i>nucleata</i> .<br>An entire individual. Two others and two opposite separated valves are in the original type series from this locality. The specimen figured under this name in Geol. Ia., vol. 1, pt. 2, was a type of <i>Cypricardella oblonga</i> Hall, q. v. |
| Bloomington, Ind.           | Internal cast of a right valve. Nine other valves and casts are in the type series from this locality.                                                                                                                                                                                                           |
| .....<br>Spergen Hill, Ind. | As <i>Cypricardella nucleata</i> Hall.<br>" <i>Microdon</i> ( <i>Cypricardella</i> ) <i>oblonga</i> .<br>" " " " An entire individual of medium size which was one of the original types of <i>Cypricardella oblonga</i> . Five other smaller ones from this local. are in the orig. type series.                |
| .....<br>Spergen Hill, Ind. | As <i>Microdon</i> ( <i>Cypricardella</i> ) <i>oblonga</i> .<br>A right valve preserving the hinge and a very large, imperfect left valve.                                                                                                                                                                       |
| .....                       | See <i>Sanguinolites plicatus</i> .                                                                                                                                                                                                                                                                              |
| .....<br>Granville, Ohio.   | As <i>Microdon reservatus</i> .<br>" " " " Casts of a right and two left valves.                                                                                                                                                                                                                                 |
| .....<br>Spergen Hill, Ind. | As <i>Microdon</i> ( <i>Cypricardella</i> ) <i>subelliptica</i> .<br>Two right valves, one of which shows the interior.                                                                                                                                                                                          |
| .....<br>Spergen Hill, Ind. | As <i>Microdon</i> ( <i>Cypricardella</i> ) <i>subelliptica</i> .<br>An individual. Five others are in the original type series.                                                                                                                                                                                 |
| Bloomington, Ind.           | Four specimens from this locality are in the original type series.                                                                                                                                                                                                                                               |
| .....                       | See <i>Cypricardinia indianensis</i> .                                                                                                                                                                                                                                                                           |
| .....                       | " <i>Edmondia subplana</i> .                                                                                                                                                                                                                                                                                     |
| Granville, Ohio.            | As <i>Cypricardinia indenta</i> Conrad. Entire internal cast of an individual. Figs. are enlargements to two diameters.                                                                                                                                                                                          |
| .....                       | See <i>Cypricardinia consimilis</i> and <i>Cypricardinia sulcifera</i> .                                                                                                                                                                                                                                         |
| .....                       | As <i>Cypricardia indianensis</i> .                                                                                                                                                                                                                                                                              |
| Bloomington, Ind.           | An imbedded right valve, outline somewhat restored in figure, which is natural size. Nine other separate valves from this locality are in the original type series.                                                                                                                                              |
| Spergen Hill, Ind.          | As <i>Cypricardia indianensis</i> . Six separate valves, imbedded, from this locality are in the original type series.                                                                                                                                                                                           |
| Alton, Ill.                 | As <i>Cypricardia indianensis</i> . Three imperfect valves from this locality are in the original type series.                                                                                                                                                                                                   |
| Spergen Hill, Ind.          | A small, entire individual and a large right valve.                                                                                                                                                                                                                                                              |
| .....                       | As <i>Cypricardinia indenta</i> Conrad.                                                                                                                                                                                                                                                                          |
| Burlington, Ia.             | Cast of a right valve. Figure is an enlargement to three diameters.                                                                                                                                                                                                                                              |
| .....                       | See <i>Schizodus cuneus</i> .                                                                                                                                                                                                                                                                                    |
| .....                       | " " <i>æqualis</i> .                                                                                                                                                                                                                                                                                             |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES, AND AUTHOR.   | REFERENCE.  |                   |       |       |        |
|---------------|------------------|-------------------|-------------------------------|-------------|-------------------|-------|-------|--------|
|               |                  |                   |                               | Work.       | Vol.              | P.    | Pl.   | Figs.  |
| Kind.         | <u>5150</u><br>1 | Type.             | <b>Dexiobia</b> A. Winchell.  |             |                   |       |       |        |
|               |                  |                   | ovata ..... Hall.             | Geol. Ia.   | 1, pt. 2          | 522   | 7     | 10a-c  |
| "             | <u>5151</u><br>1 | Fig'd.            | " ..... "                     | " "         | 1, pt. 2          | 522   | ..... | .....  |
|               |                  |                   | <b>Edmondia</b> de Koninck.   |             |                   |       |       |        |
| Wav.          | <u>5152</u><br>1 | Type.             | burlingtonensis               |             |                   |       |       |        |
|               |                  |                   | (W. & W.) Hall.               | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | ..... | 64    | 25     |
| St. L.        | <u>5153</u><br>1 | Type.             | "                             | " "         | 5, pt. 1          | 392   | 64    | 25     |
|               |                  |                   | depressa ..... H. & W.        | P. N. L. S. | pt. 2             | 91    |       |        |
| "             | <u>5153</u><br>2 | "                 | ellipsis.....                 | Pal. N. Y.  | 5, pt. 1          | 391   | 64    | 32     |
|               |                  |                   | ? subplana? ..... Hall.       | T. A. I.    | 4                 | 19    | ..... | .....  |
| Wav.          | <u>5154</u><br>1 | "                 | " ..... Whitf.                | A. M. N. H. | 1                 | 66    | 7     | 38     |
|               |                  |                   | " ..... Hall.                 | Geol. Ind.  | 12                | 342   | 30    | 38     |
| Kind.         | <u>5155</u><br>1 | Fig'd.            | ? " ..... "                   | T. A. I.    | 4                 | 19    | ..... | .....  |
|               |                  |                   | <b>Elymella</b> Hall.         |             |                   |       |       |        |
| Wav.          | <u>5156</u><br>1 | "                 | patula..... Hall.             | Pal. N. Y.  | 5, pt. 1          | 505   | 40    | 11     |
|               |                  |                   | "                             | " "         | 5, pt. 1, Pl.&Ex. | ..... | 40    | 11     |
| Kind.         | <u>5157</u><br>1 | Fig'd.            | <b>Glossites</b> Hall.        |             |                   |       |       |        |
|               |                  |                   | amygdalinus                   |             |                   |       |       |        |
| Wav.          | <u>5158</u><br>1 | Type.             | (A. Winchell) H. & W.         | P. N. L. S. | pt. 2             | 78    | ..... | .....  |
|               |                  |                   | " ..... Hall.                 | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | ..... | 40    | 13, 14 |
| Kind.         | <u>5159</u><br>2 | "                 | "                             | " "         | 5, pt. 1          | 501   | 40    | 13, 14 |
|               |                  |                   | <b>Goniophora</b> Phillips.   |             |                   |       |       |        |
| Wav.          | <u>5160</u><br>1 | Fig'd.            | plicata.....                  |             |                   |       |       |        |
|               |                  |                   | <b>Grammysia</b> de Verneuil. |             |                   |       |       |        |
| Kind.         | <u>5161</u><br>1 | Type.             | hannibalensis                 |             |                   |       |       |        |
|               |                  |                   | (Shum) H. & W.                | P. N. L. S. | pt. 2             | 62    |       |        |
| Wav.          | <u>5162</u><br>1 | "                 | " ..... Hall.                 | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | ..... | 61    | 29, 30 |
|               |                  |                   | "                             | " "         | 5, pt. 1          | 381   | 61    | 29, 30 |
| Kind.         | <u>5163</u><br>2 | "                 | "                             | " "         | 5, pt. 1, Pl.&Ex. | ..... | 61    | 33     |
|               |                  |                   | "                             | " "         | 5, pt. 1          | 381   | 61    | 33     |
| Wav.          | <u>5164</u><br>1 | Type.             | plena ..... Hall.             | " "         | 5, pt. 1          | 382   | 61    | 31, 32 |
|               |                  |                   | "                             | " "         | 5, pt. 1, Pl.&Ex. | ..... | 61    | 31, 32 |
| Kind.         | <u>5165</u><br>1 | "                 | <b>Leda</b> Schumacher.       |             |                   |       |       |        |
|               |                  |                   | Barrisi.....                  |             |                   |       |       |        |
| Wav.          | <u>5166</u><br>1 | Type.             | ohioensis.....                |             |                   |       |       |        |
|               |                  |                   | nasuta.....                   |             |                   |       |       |        |
| Kind.         | <u>5167</u><br>1 | "                 | pandoriformis(Stevens)H.      | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | ..... | 47    | 49, 50 |
|               |                  |                   | " ..... Hall.                 | " "         | 5, pt. 1          | 332   | 47    | 49, 50 |
| Wav.          | <u>5168</u><br>1 | Type.             | "                             | " "         | 5, pt. 1, Pl.&Ex. | ..... | 47    | 49, 50 |
|               |                  |                   | <b>Macrodon</b> Lycett.       |             |                   |       |       |        |
| Kind.         | <u>5169</u><br>1 | "                 | hamiltoniae.... H. & W.       | P. N. L. S. | pt. 2             | 13    |       |        |
|               |                  |                   | " ..... Hall.                 | Pal. N. Y.  | 5, pt. 1          | 349   | 51    | 7      |
| Wav.          | <u>5170</u><br>1 | Type.             | ovatus ..... H. & W.          | P. N. L. S. | pt. 2             | 15    |       |        |
|               |                  |                   | " ..... Hall.                 | Pal. N. Y.  | 5, pt. 1, Pl.&Ex. | ..... | 51    | 8      |
| Kind.         | <u>5171</u><br>1 | "                 | "                             | " "         | 5, pt. 1          | 351   | 51    | 8      |
|               |                  |                   | parvus..... W. & W.           | B. S. N. H. | 8                 | 299   | 98    | 16     |



| LOCALITY.                                              | REMARKS.                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Burlington, Ia.<br>" "                                 | As <i>Cardiomorpha ovata</i> . Casts of two right valves.<br>" " " Cast of a left valve imbedded with two of the types of <i>Spirifer hirtus</i> W. & W.                                                                                                                              |
| " "<br>Granville, Ohio.                                | As type of <i>Edmondia ellipsis</i> Hall. Cast of left valve.<br>Cast of right valve.<br>See <i>Edmondia burlingtonensis</i> .<br>As <i>Cypricardia subplana</i> .                                                                                                                    |
| Spergen Hill, Ind.<br>Bloomington, Ind.                | A left valve.<br>An imperfect left valve.                                                                                                                                                                                                                                             |
| Medina, Ohio.<br>.....<br>.....                        | As a type of <i>Modiomorpha ? hyalea</i> Hall, by error. Cast of a pair of expanded valves.<br>As <i>Modiomorpha ? amygdalina</i> .<br>" " " "                                                                                                                                        |
| Burlington, Ia.<br>.....<br>.....                      | Cast of a right valve and the nearly entire imprint of a pair of expanded valves.<br>See <i>Sanguinolites plicatus</i> .                                                                                                                                                              |
| .....<br>Cuyahoga Co., Ohio.<br>.....<br>Hannibal, Mo. | As <i>Grammysia (Leptodomus ?) hannibalensis</i> .<br>Cast of a right valve and a much exfoliated individual.<br>As <i>Grammysia (Leptodomus ?) hannibalensis</i> .<br>Cast of a right valve from the Lithographic limestone.<br>See also <i>Grammysia plena</i> .                    |
| Burlington, Ia.<br>.....<br>.....<br>.....             | As <i>Grammysia (Leptodomus ?) hannibalensis</i> Shumard. Casts of two left valves. Original of fig. 31 is imbedded with an unfigured type of <i>Mytilarca occidentalis</i> W. & W.<br>See <i>Palæoneilo Barrisi</i> .<br>" <i>Leda pandoriformis</i> .<br>" <i>Nuculana nasuta</i> . |
| Newark, Ohio.                                          | As <i>Leda (Nuculana) ohioensis</i> . Internal cast of a right valve in a block with several other figured specimens.                                                                                                                                                                 |
| Bedford, Ohio.<br>.....                                | Cast of a small right valve. See also <i>Macrodon ovatus</i> .<br>As <i>Macrodon hamiltoniæ</i> .                                                                                                                                                                                     |
| Newark, Ohio.<br>Burlington, Ia.                       | Internal cast of a left valve.<br>Internal casts of two opposite valves.                                                                                                                                                                                                              |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                 | REFERENCE.                            |                        |                 |                  |                       |
|---------------|------------------|-------------------|--------------------------------------------|---------------------------------------|------------------------|-----------------|------------------|-----------------------|
|               |                  |                   |                                            | Work.                                 | Vol.                   | P.              | Pl.              | Figs.                 |
|               |                  |                   | <b>Megambonia</b> Hall.                    |                                       |                        |                 |                  |                       |
|               |                  |                   | <i>Lyoni</i> .....                         | .....                                 | .....                  | .....           | .....            | .....                 |
|               |                  |                   | <i>Microdon</i> Conrad.....                | .....                                 | .....                  | .....           | .....            | .....                 |
|               |                  |                   | <i>ellipticus</i> .....                    | .....                                 | .....                  | .....           | .....            | .....                 |
|               |                  |                   | <i>nucleata</i> .....                      | .....                                 | .....                  | .....           | .....            | .....                 |
|               |                  |                   | <i>oblonga</i> .....                       | .....                                 | .....                  | .....           | .....            | .....                 |
|               |                  |                   | <i>reservatus</i> .....                    | .....                                 | .....                  | .....           | .....            | .....                 |
|               |                  |                   | <i>subelliptica</i> .....                  | .....                                 | .....                  | .....           | .....            | .....                 |
|               |                  |                   | sp.....                                    | A. M. N. H.                           | I                      | 65              | .....            | .....                 |
|               |                  |                   | <b>Modiomorpha</b> H. & W.                 |                                       |                        |                 |                  |                       |
|               |                  |                   | <i>amygdalina</i> .....                    | .....                                 | .....                  | .....           | .....            | .....                 |
| Wav.          | $\frac{5162}{1}$ | Type.             | hyalea.....H. & W.<br>Hall.                | P. N. L. S.<br>Pal. N. Y.             | pt. 2<br>5, pt. I      | 79<br>292       | 4I               | 28-30                 |
|               |                  |                   | <b>Mytilarca</b> H. & W.                   |                                       |                        |                 |                  |                       |
| Kind.         | $\frac{5163}{1}$ | Fig'd.            | fibristriata<br>(W. & W.) H. & W.<br>Hall. | P. N. L. S.<br>Pal. N. Y.             | pt. 2<br>5, pt. I      | 24<br>264       | 33<br>87         | 6<br>6                |
| "             | $\frac{5164}{1}$ | Type.             | occidentalis... W. & W.                    | B. S. N. H.                           | 8                      | 297             | .....            | .....                 |
| "             | "                | "                 | " (W. & W.) H. & W.<br>Hall.               | P. N. L. S.<br>Pal. N. Y.             | pt. 2<br>5, pt. I      | 24<br>263       | 33<br>87         | 5<br>II               |
|               |                  |                   | <b>Nucula</b> Lamarck.                     |                                       |                        |                 |                  |                       |
| Wav.          | $\frac{5165}{1}$ | Fig'd.            | Houghtoni (Stevens) Hall.                  | Pal. N. Y.                            | 5, pt. I,<br>Pl. & Ex. | .....           | 45               | 29                    |
|               |                  |                   | "                                          | "                                     | 5, pt. I               | 323             | 45               | 29                    |
| "             | $\frac{5165}{2}$ | "                 | "                                          | "                                     | 5, pt. I,<br>Pl. & Ex. | .....           | 45               | 30, 3I                |
|               |                  |                   | "                                          | St. G. N. Y.                          | I                      | .....           | 7                | 8, 9                  |
|               |                  |                   | "                                          | Pal. N. Y.                            | 5, pt. I               | 323             | 45               | 30, 3I                |
| Kind.         | $\frac{5165}{3}$ | Type.             | " "W. & W.                                 | B. S. N. H.                           | 8                      | 298             | .....            | .....                 |
|               |                  |                   | <i>iowensis</i> .....                      | .....                                 | .....                  | .....           | .....            | .....                 |
|               |                  |                   | <i>nasuta</i> .....                        | .....                                 | .....                  | .....           | .....            | .....                 |
| St. L.        | $\frac{5166}{1}$ | Type.             | Shumardana.....Hall.<br>Whitf.<br>Hall.    | T. A. I.<br>A. M. N. H.<br>Geol. Ind. | 4<br>I<br>I2           | 16<br>57<br>343 | 7<br>30          | 2, 3<br>2, 3          |
| "             | $\frac{5166}{2}$ | "                 | " (Hall) Whitf.<br>Hall.                   | A. M. N. H.<br>Geol. Ind.             | I<br>I2                | 57<br>343       | 7<br>30          | 6, in part<br>6,      |
| "             | $\frac{5166}{1}$ | Fig'd.            | " (Hall) Whitf.<br>Hall.                   | A. M. N. H.<br>Geol. Ind.             | I<br>I2                | 57<br>343       | 7<br>30          | 4-6<br>4-6            |
|               |                  |                   | <b>Nuculana</b> Link.                      |                                       |                        |                 |                  |                       |
| "             | $\frac{5167}{1}$ | Type.             | nasuta.....Hall<br>Whitf.<br>Hall.         | T. A. I.<br>A. M. N. H.<br>Geol. Ind. | 4<br>I<br>I2           | 17<br>57<br>344 | .....<br>7<br>30 | .....<br>7, 8<br>7, 8 |
| "             | "                | Fig'd.            | " ... (Hall) Whitf.<br>Hall.               | A. M. N. H.<br>Geol. Ind.             | I<br>I2                | 57<br>344       | 7<br>30          | 9<br>9                |
|               |                  |                   | <b>Orthonota</b> Conrad.                   |                                       |                        |                 |                  |                       |
|               |                  |                   | <i>ventricosa</i> .....                    | .....                                 | .....                  | .....           | .....            | .....                 |



| LOCALITY.          | REMARKS.                                                                                                                                   |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| .....              | See <i>Cardiopsis radiata</i> .                                                                                                            |
| .....              | Name preoccupied. See <i>Cypricardella</i> .                                                                                               |
| .....              | See <i>Cypricardella elliptica</i> .                                                                                                       |
| .....              | “ “ <i>nucleata</i> .                                                                                                                      |
| .....              | “ “ <i>oblonga</i> .                                                                                                                       |
| .....              | “ “ <i>reservata</i> .                                                                                                                     |
| .....              | “ “ <i>subelliptica</i> .                                                                                                                  |
| .....              | “ “ <i>elliptica</i> .                                                                                                                     |
| .....              | See <i>Glossites amygdalinus</i> .                                                                                                         |
| Granville, Ohio.   | Casts of three right valves. See also <i>Elymella patula</i> .                                                                             |
| Burlington, Ia.    | Cast of a left valve.                                                                                                                      |
| “ “                | As <i>Mytilus occidentalis</i> . Cast of left valve in block with <i>Grammysia plena</i> Hall, fig. 31, pl. 61, Pal. N. Y., vol. 5, pt. 1. |
| “ “                | Cast of a left valve.                                                                                                                      |
| .....              | As <i>Nucula iowensis</i> W. & W.                                                                                                          |
| Licking Co., Ohio. | Cast of right valve retaining some silicified shell.                                                                                       |
| .....              | As <i>Nucula iowensis</i> W. & W.                                                                                                          |
| .....              | “ “ “ “                                                                                                                                    |
| Newark, Ohio.      | Casts of two left valves imbedded in the same block with several other figured specimens.                                                  |
| Burlington, Ia.    | As type of <i>Nucula iowensis</i> W. & W. Internal cast of left valve.                                                                     |
| .....              | See <i>Nucula Houghtoni</i> .                                                                                                              |
| .....              | “ <i>Nuculana nasuta</i> .                                                                                                                 |
| Spergen Hill, Ind. | An entire individual. Twelve other specimens from this locality are in the original type series.                                           |
| Bloomington, Ind.  | A left valve used for part of the figure. Four other specimens from this locality are in the original type series.                         |
| Spergen Hill, Ind. | An entire individual and the internal cast of a left valve. The latter was used for part of fig. 6. Not in the original series.            |
| .....              | As <i>Nucula nasuta</i> .                                                                                                                  |
| Spergen Hill, Ind. | As <i>Leda nasuta</i> . Two small individuals.                                                                                             |
| “ “                | As <i>Leda nasuta</i> . An entire individual of large size for the species. Not in the original series.                                    |
| .....              | See <i>Spathella ventricosa</i> .                                                                                                          |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.                        | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                                                                                       | REFERENCE.                                      |                                  |                                  |                                  |                                  |
|---------------|---------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
|               |                                 |                    |                                                                                                                                  | Work.                                           | Vol.                             | P.                               | Pl.                              | Figs.                            |
| Wav.          | <u>5168</u><br>1                | Type.              | <b>Palæoneilo</b> H. & W.<br>attenuata..... <i>H. &amp; W.</i><br><i>Hall.</i>                                                   | P. N. L. S.<br>St. G. N. Y.,<br>Pal. N. Y.      | pt. 2<br>I<br>5, pt. I           | 12<br>.....<br>346               | 7<br>50                          | 22<br>34-36                      |
| Kind.         | <u>5168</u><br><u>5169</u><br>1 | "                  | " (H. & W.) <i>Hall.</i><br>Barrisi ..... <i>W. &amp; W.</i>                                                                     | " "<br>B. S. N. H.                              | 5, pt. I<br>8                    | 346<br>298                       | 50<br>.....                      | 37-39<br>.....                   |
| Wav.          | <u>5170</u><br>1                | Fig'd.             | <i>Barrisi</i> H. & W.<br>(non W. & W.)<br>sulcatina ( <i>Hall</i> ) <i>H. &amp; W.</i><br><i>Hall.</i>                          | P. N. L. S.<br>Pal. N. Y.                       | pt. 2<br>5, pt. I,<br>Pl.&Ex.    | 11<br>.....                      | 50                               | 42, 45                           |
| "             | "                               | "                  | " ..... "                                                                                                                        | " "                                             | 5, pt. I<br>Pl.&Ex.              | 347<br>.....                     | 50                               | 42, 45                           |
| "             | "                               | "                  | " ..... "                                                                                                                        | " "                                             | 5, pt. I<br>Pl.&Ex.              | 347<br>.....                     | 50                               | 43, 44                           |
| "             | "                               | "                  | " ..... "                                                                                                                        | " "                                             | 5, pt. I<br>Pl.&Ex.              | 347<br>.....                     | 50                               | 43, 44                           |
| "             | "                               | "                  | " ..... "                                                                                                                        | " "                                             | 5, pt. I<br>Pl.&Ex.              | 347<br>.....                     | 50                               | 46                               |
| "             | "                               | "                  | " ..... "                                                                                                                        | " "                                             | 5, pt. I<br>Pl.&Ex.              | 347<br>.....                     | 50                               | 46                               |
| "             | <u>5171</u><br>1                | Type.              | truncata..... <i>Hall.</i><br>"                                                                                                  | " "<br>"                                        | 5, pt. I,<br>Pl.&Ex.<br>5, pt. I | .....<br>347                     | 50<br>50                         | 41<br>41                         |
| Kind.         | <u>5172</u><br>1                | Gen. and Sp. Type. | <b>Pernopecten</b> A. Winchell.<br>limiformis .... <i>W. &amp; W.</i><br><i>A. Winchell.</i><br><i>Hall.</i>                     | B. S. N. H.<br>P. A. N. S.<br>St. G. N. Y.<br>" | 8<br>17<br>I<br>5, pt. I         | 295<br>125<br>12<br>lvii         | .....<br>.....<br>I<br>.....     | .....<br>.....<br>1, 2<br>1, 2   |
| Wav.          | <u>5173</u><br>1                | Type.              | <b>Pholadella</b> H. & W.<br><i>cuneata</i> .....<br><i>decussata</i> .....<br>Newberryi..... <i>H. &amp; W.</i><br><i>Hall.</i> | P. N. L. S.<br>Pal. N. Y.                       | pt. 2<br>5, pt. I                | 65<br>471                        | 78                               | 25                               |
| Kind.         | <u>5174</u><br>1                | "                  | <b>Promacrus</b> Meek.<br>cuneatus ..... <i>H. &amp; W.</i><br><i>Hall.</i>                                                      | P. N. L. S.<br>Pal. N. Y.                       | pt. 2<br>5, pt. I,<br>Pl.&Ex.    | 66<br>.....                      | 78                               | 28                               |
| St. L.        | <u>5175</u><br>1                | "                  | <b>Pteronites</b> McCoy.<br>spergenensis..... <i>Whitf.</i><br><i>Hall.</i>                                                      | A. M. N. H.<br>Geol. Ind.                       | I<br>12                          | 56<br>.....                      | 7<br>30                          | I<br>I                           |
| St. L.        | <u>5176</u><br>1                | Type.              | <b>Sanguinolites</b> McCoy.<br><i>æolus</i> .....<br><i>flavius</i> .....<br><i>valvulus</i> .....<br><i>ventricosus</i> .....   | .....<br>.....<br>.....<br>.....                | .....<br>.....<br>.....<br>..... | .....<br>.....<br>.....<br>..... | .....<br>.....<br>.....<br>..... | .....<br>.....<br>.....<br>..... |
| "             | <u>5176</u><br>2                | "                  | ( <b>Goniophora</b> ?)<br>plicata ..... <i>Hall.</i><br><i>Whitf.</i><br><i>Hall.</i>                                            | T. A. I.<br>A. M. N. H.<br>Geol. Ind.           | 4<br>I<br>12                     | 18<br>66<br>341                  | .....<br>7<br>30                 | .....<br>39<br>39                |
| Wav.          | <u>5177</u><br>1                | "                  | <b>Schizodus</b> King.<br>æqualis .... <i>Hall.</i><br>"                                                                         | Pal. N. Y.<br>"                                 | 5, pt. I<br>5, pt. I,<br>Pl.&Ex. | 459<br>.....                     | 75<br>75                         | 35<br>35                         |



| LOCALITY.                                              | REMARKS.                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Licking Co., Ohio.<br>Newark, Ohio.<br>Burlington, Ia. | Internal cast of a left valve.<br>Casts of one right and two left valves.<br>As <i>Leda Barrisi</i> . Cast of left valve in block with type of <i>Pernopecten limiformis</i> W. & W. Casts of two left and two right valves and the external imprint of a left valve from this locality are in the type series. |
| .....                                                  | See <i>Palæoneilo sulcatina</i> .                                                                                                                                                                                                                                                                               |
| .....                                                  | As " <i>Barrisi</i> W. & W.                                                                                                                                                                                                                                                                                     |
| .....                                                  | " " " "                                                                                                                                                                                                                                                                                                         |
| Newark, Ohio.                                          | Casts of two opposite valves.                                                                                                                                                                                                                                                                                   |
| .....                                                  | As <i>Palæoneilo Barrisi</i> W. & W.                                                                                                                                                                                                                                                                            |
| Newark, Ohio.                                          | Imprints of two opposite valves in a block with several other figured specimens.                                                                                                                                                                                                                                |
| .....                                                  | As <i>Palæoneilo Barrisi</i> W. & W.                                                                                                                                                                                                                                                                            |
| Richfield, Summit Co., Ohio.                           | Internal cast of a right valve. These are not <i>Palæoneilo sulcatina</i> Conrad (= <i>Nuculites sulcatus</i> Conrad).                                                                                                                                                                                          |
| Newark, Ohio.                                          | Cast of a right valve.                                                                                                                                                                                                                                                                                          |
| .....                                                  | As <i>Aviculopecten limiformis</i> .                                                                                                                                                                                                                                                                            |
| .....                                                  | Made type of genus <i>Pernopecten</i> .                                                                                                                                                                                                                                                                         |
| Burlington, Ia.                                        | Int. cast in same block with a type of <i>Palæoneila Barrisi</i> W. & W.                                                                                                                                                                                                                                        |
| .....                                                  | See <i>Promacrus cuneatus</i> .                                                                                                                                                                                                                                                                                 |
| .....                                                  | " " " "                                                                                                                                                                                                                                                                                                         |
| Licking Co., Ohio.                                     | Cast of left valve, incomplete posteriorly.                                                                                                                                                                                                                                                                     |
| .....                                                  | As <i>Pholadella cuneata</i> .                                                                                                                                                                                                                                                                                  |
| .....                                                  | " type of <i>Pholadella decussata</i> Hall.                                                                                                                                                                                                                                                                     |
| Burlington, Ia.                                        | Imperfect cast of an individual and the imprint of its left valve.                                                                                                                                                                                                                                              |
| Spergen Hill, Ind.                                     | A left valve, imbedded.                                                                                                                                                                                                                                                                                         |
| .....                                                  | See <i>Sphenotus æolus</i> .                                                                                                                                                                                                                                                                                    |
| .....                                                  | " " <i>flavius</i> .                                                                                                                                                                                                                                                                                            |
| .....                                                  | " " <i>valvulus</i> .                                                                                                                                                                                                                                                                                           |
| .....                                                  | " <i>Spathella ventricosa</i> .                                                                                                                                                                                                                                                                                 |
| .....                                                  | As <i>Cypricardella plicata</i> .                                                                                                                                                                                                                                                                               |
| .....                                                  | " <i>Goniophora ? plicata</i> .                                                                                                                                                                                                                                                                                 |
| Bloomington, Ill.<br>Spergen Hill, Ind.                | An imbedded right valve.<br>As <i>Cypricardella plicata</i> . Left valve, imbedded.                                                                                                                                                                                                                             |
| Licking Co., Ohio                                      | As <i>Cytherodon (Schizodus) quadrangularis</i> H. & W. Cast of indiv.                                                                                                                                                                                                                                          |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.          | REFERENCE.  |                      |      |      |        |
|---------------|------------------|-------------------|-------------------------------------|-------------|----------------------|------|------|--------|
|               |                  |                   |                                     | Work.       | Vol.                 | P.   | Pl.  | Figs.  |
| Wav.          | <u>5178</u><br>1 | Type.             | <b>Schizodus</b> King— <i>Cont.</i> |             |                      |      |      |        |
|               |                  |                   | cuneus..... <i>Hall.</i>            | Pal. N. Y.  | 5, pt. 1,<br>Pl.&Ex. | .... | 75   | 29, 30 |
|               |                  |                   | “ “                                 | “ “         | 5, pt. I             | 458  | 75   | 29, 30 |
| Kind.         | <u>5179</u><br>1 | “                 | <b>Spathella</b> Hall.              |             |                      |      |      |        |
|               |                  |                   | ventricosa..... <i>W. &amp; W.</i>  | B. S. N. H. | 8                    | 297  | ...  | .....  |
|               |                  |                   | <i>Hall.</i>                        | Pal. N. Y.  | 5, pt. 1,<br>Pl.&Ex. | .... | 66   | 41, 42 |
|               |                  |                   | “ “                                 | “ “         | 5, pt. I             | 408  | 66   | 41, 42 |
| Wav.          | <u>5180</u><br>1 | “                 | <b>Sphenotus</b> Hall.              |             |                      |      |      |        |
|               |                  |                   | æolus..... <i>H. &amp; W.</i>       | P. N. L. S. | pt. 2                | 46   | .... | .....  |
|               |                  |                   | <i>Hall.</i>                        | Pal. N. Y.  | 5, pt. 1,<br>Pl.&Ex. | .... | 66   | 33, 35 |
|               |                  |                   | “ “                                 | “ “         | 5, pt. I             | 404  | 66   | 33, 35 |
| “             | <u>5181</u><br>1 | “                 | flavius..... <i>H. &amp; W.</i>     | P. N. L. S. | pt. 2                | 47   | ...  | .....  |
|               |                  |                   | <i>Hall.</i>                        | Pal. N. Y.  | 5, pt. 1,<br>Pl.&Ex. | .... | 66   | 27-29  |
|               |                  |                   | “ “                                 | “ “         | 5, pt. I             | 403  | 66   | 27-29  |
| “             | <u>5182</u><br>1 | “                 | valvulus..... <i>H. &amp; W.</i>    | P. N. L. S. | pt. 2                | 46   | .... | .....  |
|               |                  |                   | <i>Hall.</i>                        | Pal. N. Y.  | 5, pt. 1,<br>Pl.&Ex. | .... | 66   | 30     |
|               |                  |                   | “ “                                 | “ “         | 5, pt. I             | 403  | 66   | 30     |

Class GASTROPODA.

|        |                  |                    |                                     |             |          |       |       |        |
|--------|------------------|--------------------|-------------------------------------|-------------|----------|-------|-------|--------|
| Kind.  | <u>5183</u><br>1 | Type.              | <b>Bellerophon</b> Montfort.        |             |          |       |       |        |
|        |                  |                    | bilabiatus..... <i>W. &amp; W.</i>  | B. S. N. H. | 8        | 304   | ....  | .....  |
|        |                  |                    | <i>cancellatus</i> .....            | .....       | .....    | ..... | ..... | .....  |
| Kind.  | <u>5184</u><br>1 | Type.              | perelegans.... <i>W. &amp; W.</i>   | B. S. N. H. | 8        | 304   | ....  | .....  |
|        |                  |                    | sublævis..... <i>Hall.</i>          | T. A. I.    | 4        | 32    |       |        |
| St. L. | <u>5185</u><br>1 | “                  | “ “                                 | Geol. Ia.   | 1, pt. 2 | 666   | 23    | 15a-c  |
|        |                  |                    | <i>Whitf.</i>                       | A. M. N. H. | I        | 89    | 8     | 7      |
|        |                  |                    | <i>Hall.</i>                        | Geol. Ind.  | 12       | 37I   | 3I    | 7      |
| “      | <u>5185</u><br>2 | “                  | “ “                                 | T. A. I.    | 4        | 32    | ....  | .....  |
| “      | “                | Fig'd.             | “ ....( <i>Hall</i> ) <i>Whitf.</i> | A. M. N. H. | I        | 89    | 8     | 6      |
|        |                  |                    | <i>Hall.</i>                        | Geol. Ind.  | 12       | 37I   | 3I    | 6      |
| “      | <u>5186</u><br>1 | Type.              | textilis..... <i>Hall.</i>          | Am. P. F.   | .....    | 243   |       |        |
|        |                  |                    | “ “                                 | T. A. I.    | 4        | 3I    | ....  | .....  |
|        |                  |                    | <i>Whitf.</i>                       | A. M. N. H. | I        | 90    | 8     | 4, 5   |
|        |                  |                    | <i>Hall.</i>                        | Geol. Ind.  | 12       | 37I   | 3I    | 4, 5   |
| “      | <u>5186</u><br>2 | “                  | “ “                                 | T. A. I.    | 4        | 3I    | ....  | .....  |
| Kind.  | <u>5187</u><br>1 | “                  | vinculatus..... <i>W. &amp; W.</i>  | B. S. N. H. | 8        | 304   | ....  | .....  |
|        |                  |                    | <i>Bulimella</i> Hall.....          | .....       | .....    | ..... | ..... | .....  |
|        |                  |                    | <i>bulimiformis</i> .....           | .....       | .....    | ..... | ..... | .....  |
|        |                  |                    | <i>canaliculata</i> .....           | .....       | .....    | ..... | ..... | .....  |
|        |                  |                    | <i>elongata</i> .....               | .....       | .....    | ..... | ..... | .....  |
| St. L. | <u>5188</u><br>1 | Gen. and Sp. Type. | <b>Bulimorpha</b> Whitfield.        |             |          |       |       |        |
|        |                  |                    | bulimiformis..... <i>Hall.</i>      | T. A. I.    | 4        | 29    | ....  | .....  |
|        |                  |                    | <i>Whitf.</i>                       | A. M. N. H. | I        | 74    | 8     | 37     |
|        |                  |                    | <i>Hall.</i>                        | Geol. Ind.  | 12       | 366   | 8     | 37     |
| “      | <u>5188</u><br>2 | “                  | “ “                                 | T. A. I.    | 4        | 29    | ....  | .....  |
|        |                  |                    | <i>Whitf.</i>                       | A. M. N. H. | I        | 74    | 3I    | 38, 39 |
|        |                  |                    | <i>Hall.</i>                        | Geol. Ind.  | 12       | 366   | 3I    | 38, 39 |



| LOCALITY.                                                  | REMARKS.                                                                                                                                                                                  |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....<br>Granville, Ohio.                                  | As <i>Cytherodon</i> ( <i>Schizodus</i> ) <i>cuneus</i> .<br>Casts of two right valves. In the second reference fig. 30 is<br>"referred to this species with doubt."                      |
| .....<br>.....<br>Burlington, Ia.                          | As <i>Orthonota ventricosa</i> .<br>" <i>Sanguinolites ventricosus</i> .<br>Casts of two left valves.                                                                                     |
| .....<br>.....<br>Newark, Ohio.                            | As <i>Sanguinolites æolus</i> .<br>" " "<br>Nearly entire internal cast of an individual.                                                                                                 |
| .....<br>.....<br>Licking Co., Ohio.                       | As <i>Sanguinolites</i> ? <i>flavius</i> .<br>" " "<br>Cast of an individual.                                                                                                             |
| .....<br>.....<br>Newark, Ohio.                            | As <i>Sanguinolites valvulus</i> .<br>" " "<br>Cast of a right valve.                                                                                                                     |
| Burlington, Ia.                                            | Casts of two individuals.                                                                                                                                                                 |
| .....<br>Burlington, Ia.                                   | Name pre-occupied. See <i>Bellerophon textilis</i> .<br>Casts of two individuals.                                                                                                         |
| Bloomington, Ind.<br>Spergen Hill, Ind.                    | Two individuals. Sixteen others from this locality are orig. types.<br>Thirteen individuals from this locality are in the original type series.                                           |
| " "                                                        | A very large individual.. Not in the original series.                                                                                                                                     |
| .....                                                      | As <i>Bellerophon cancellatus</i> .                                                                                                                                                       |
| Bloomington, Ind.<br>Spergen Hill, Ind.<br>Burlington, Ia. | An entire individual. Seven other individuals from this locality are<br>in the original series of types.<br>As <i>Bellerophon cancellatus</i> . An individual.<br>Cast of an individual.  |
| .....<br>.....<br>.....                                    | Name pre-occupied. See <i>Bulimorpha</i> .<br>See <i>Bulimorpha bulimiformis</i> .<br>" " <i>canaliculata</i> .<br>" " <i>elongata</i> .                                                  |
| .....<br>.....<br>Bloomington, Ind.                        | As <i>Bulimella bulimiformis</i> . Type of genus.<br>Present genus proposed.<br>A comparatively large individual. Two smaller ones from this<br>locality are in the original type series. |
| .....                                                      | As <i>Bulimella bulimiformis</i> .                                                                                                                                                        |
| Spergen Hill, Ind.                                         | Practically entire. Both figures were made from one individual.<br>Eleven other specimens from this local. are in the orig. type series.                                                  |

Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Work.                                              | Vol.                  | P.                     | Pl.                       | Figs.                            |
| St. L.        | $\frac{5189}{1}$ | Type.              | <b>Bulimorpha</b> Whitf.— <i>Cont.</i><br>canaliculata..... <i>Hall.</i><br><i>Whitf.</i><br><i>Hall.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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A. I.<br>A. M. N. H.<br>Geol. Ind.              | 4<br>1<br>12          | 29<br>74<br>367        | .....<br>8<br>31          | .....<br>41<br>41                |
| "             | $\frac{5190}{1}$ | "                  | elongata..... <i>Hall.</i><br>"<br><i>Whitf.</i><br><i>Hall.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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A. I.<br>Am. P. F.<br>A. M. N. H.<br>Geol. Ind. | 4<br>.....<br>1<br>12 | 30<br>245<br>75<br>368 | .....<br>.....<br>8<br>31 | .....<br>.....<br>40<br>40       |
|               |                  |                    | <b>Capulus</b> Montfort.<br><i>acutirostris</i> .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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| St. L.        | $\frac{5191}{1}$ | Type.              | <b>Cyclonema</b> Hall.<br>Leavenworthanum.. <i>Hall.</i><br><i>Whitf.</i><br><i>Hall.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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A. I.<br>A. M. N. H.<br>Geol. Ind.              | 4<br>1<br>12          | 24<br>75<br>363        | .....<br>8<br>31          | .....<br>29, 31<br>29, 31        |
| "             | $\frac{5191}{2}$ | "                  | " " "<br><i>Whitf.</i><br><i>Hall.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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A. I.<br>A. M. N. H.<br>Geol. Ind.              | 4<br>1<br>12          | 24<br>75<br>363        | .....<br>8<br>31          | .....<br>30<br>30                |
| "             | $\frac{5191}{3}$ | "                  | " " "<br>.. "                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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A. I.                                           | 4                     | 24                     | .....                     | .....                            |
| "             | $\frac{5192}{1}$ | "                  | subangulatum..... <i>Hall.</i><br><i>Whitf.</i><br><i>Hall.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                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M. N. H.<br>Geol. Ind.                     | 4<br>1<br>12          | 25<br>76<br>364        | .....<br>8<br>31          | .....<br>32<br>32                |
| "             | $\frac{5193}{1}$ | Gen. and Sp. Type. | <b>Eotrochus</b> Whitf.<br>concavus..... <i>Hall.</i><br>"<br><i>Whitf.</i><br><i>Hall.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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A. I.<br>Am. P. F.<br>A. M. N. H.<br>Geol. Ind. | 4<br>.....<br>1<br>12 | 24<br>245<br>78<br>365 | .....<br>.....<br>9<br>32 | .....<br>.....<br>21-23<br>21-23 |
| "             | $\frac{5193}{2}$ | "                  | " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " 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| LOCALITY.          | REMARKS.                                                                                                                                    |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| .....              | As <i>Bulimella canaliculata</i> .                                                                                                          |
| Spergen Hill, Ind. | An almost entire individual.                                                                                                                |
| .....              | As <i>Bulimella elongata</i> .                                                                                                              |
| .....              | “ <i>Polyphemopsis teretiformis</i> Hall. Name proposed.                                                                                    |
| Spergen Hill, Ind. | An individual somewhat broken at base and apex.                                                                                             |
| .....              | See <i>Platyceras acutirostris</i> .                                                                                                        |
| .....              | As <i>Pleurotomaria Leavenworthana</i> .                                                                                                    |
| Spergen Hill, Ind. | A large individual and one of average size. Twelve others from this locality are in the original type series.                               |
| .....              | As <i>Pleurotomaria Leavenworthana</i> .                                                                                                    |
| Bloomington, Ind.  | A large, somewhat imperfect individual. Twelve other much smaller individuals from this locality are in the original type series.           |
| Alton, Ill.        | As <i>Pleurotomaria Leavenworthana</i> . Two individuals from this locality are in the original type series.                                |
| .....              | As <i>Pleurotomaria subangulata</i> .                                                                                                       |
| Spergen Hill, Ind. | A large individual. A small one from this locality is in the original type series.                                                          |
| .....              | As <i>Pleurotomaria concava</i> .                                                                                                           |
| .....              | “ “ <i>tenuimarginata</i> Hall. Name proposed.                                                                                              |
| .....              | Present genus proposed.                                                                                                                     |
| Spergen Hill, Ind. | An individual of medium size, and another cut to show the vertical section. Five others from this locality are in the original type series. |
| Alton, Ill.        | As <i>Pleurotomaria concava</i> . Two individuals.                                                                                          |
| Burlington, Ia.    | A weathered individual, imbedded.                                                                                                           |
| Bloomington, Ind.  | Two individuals. Nine others from this locality are in the original type series.                                                            |
| Spergen Hill, Ind. | Twelve small individuals from this locality are in the original type series.                                                                |
| Bloomington, Ind.  | Two individuals. Eight others from this locality are in the original type series.                                                           |
| Spergen Hill, Ind. | Twelve small individuals from this locality are in the original type series.                                                                |
| “ “                | An individual of medium size. Seven others from this locality are in the original type series.                                              |
| Bloomington, Ind.  | Ten individuals from this locality are in the original type series.                                                                         |
| Ellettsville, Ind. | A large individual.                                                                                                                         |

Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                                                                    | REFERENCE.                            |              |                 |         |                  |
|---------------|------------------|--------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------|--------------|-----------------|---------|------------------|
|               |                  |                    |                                                                                                               | Work.                                 | Vol.         | P.              | Pl.     | Figs.            |
| St. L.        | <u>5198</u><br>1 | Type.              | <b>Euomphalus</b> Sowerby— <i>Cont.</i><br>spergenensis,<br>var. planorbiformis. <i>H.</i><br>Whitf.<br>Hall. | T. A. I.<br>A. M. N. H.<br>Geol. Ind. | 4<br>1<br>12 | 20<br>70<br>351 | 8<br>31 | 20, 21<br>20, 21 |
| "             | <u>5198</u><br>2 | "                  | " " "                                                                                                         | T. A. I.                              | 4            | 20              | ....    | .....            |
| "             | <u>5199</u><br>1 | "                  | <b>Holopea</b> Hall.<br>Proutana..... <i>Hall.</i><br>Whitf.<br>Hall.                                         | "<br>A. M. N. H.<br>Geol. Ind.        | 4<br>1<br>12 | 30<br>72<br>368 | 8<br>31 | 33, 34<br>33, 34 |
| "             | <u>5199</u><br>2 | "                  | " " " "                                                                                                       | T. A. I.                              | 4            | 30              | ....    | .....            |
| "             | <u>5199</u><br>3 | "                  | " " " "                                                                                                       | "                                     | 4            | 30              | ....    | .....            |
| "             | <u>5200</u><br>1 | Fig'd Sp. and G.T. | <b>Lepetopsis</b> Whitfield.<br>Levettei ( <i>White</i> ) <i>Whitf.</i><br>Hall.                              | A. M. N. H.<br>Geol. Ind.             | 1<br>12      | 68<br>....      | 8<br>31 | 8-12<br>8-12     |
| St. L.        | <u>5201</u><br>1 | Type.              | <b>Loxonema</b> Phillips.<br>vineta.....<br>Yandellanus..... <i>Hall.</i><br>Whitf.<br>Hall.                  | T. A. I.<br>A. M. N. H.<br>Geol. Ind. | 4<br>1<br>12 | 28<br>77<br>365 | 8<br>31 | 35, 36<br>35, 36 |
| "             | <u>5202</u><br>1 | "                  | <b>Macrocheilus</b> Phillips.<br>Littonanus..... <i>Hall.</i><br>Whitf.<br>Hall.                              | T. A. I.<br>A. M. N. H.<br>Geol. Ind. | 4<br>1<br>12 | 30<br>72<br>369 | 8<br>31 | 28<br>28         |
| "             | <u>5203</u><br>1 | "                  | <b>Murchisonia</b> d'A. & de V.<br>attenuata..... <i>Hall.</i><br>Whitf.<br>Hall.                             | T. A. I.<br>A. M. N. H.<br>Geol. Ind. | 4<br>1<br>12 | 27<br>88<br>360 | 9<br>32 | 13<br>13         |
| St. L.        | <u>5204</u><br>1 | Type.              | <i>elegantula</i> .....<br>insculpta..... <i>Hall.</i><br>Whitf.<br>Hall.                                     | T. A. I.<br>A. M. N. H.<br>Geol. Ind. | 4<br>1<br>12 | 26<br>85<br>359 | 9<br>32 | 18<br>18         |
| "             | "                | "                  | " " " "                                                                                                       | T. A. I.                              | 4            | 26              | ....    | .....            |
| Kind.         | <u>5205</u><br>1 | "                  | ?prolixa..... <i>W. &amp; W.</i>                                                                              | B. S. N. H.                           | 8            | 303             | ....    | .....            |
| St. L.        | <u>5206</u><br>1 | "                  | terebriformis..... <i>Hall.</i><br>Whitf.<br>Hall.                                                            | T. A. I.<br>A. M. N. H.<br>Geol. Ind. | 4<br>1<br>12 | 28<br>86<br>362 | 9<br>32 | 15, 16<br>15, 16 |
| "             | <u>5207</u><br>1 | "                  | turritella..... <i>Hall.</i><br>Whitf.<br>Hall.                                                               | T. A. I.<br>A. M. N. H.<br>Geol. Ind. | 4<br>1<br>12 | 27<br>88<br>361 | 9<br>32 | 12<br>12         |
| "             | <u>5208</u><br>1 | "                  | vermicula..... <i>Hall.</i><br>Whitf.<br>Hall.                                                                | T. A. I.<br>A. M. N. H.<br>Geol. Ind. | 4<br>1<br>12 | 27<br>87<br>361 | 9<br>32 | 11<br>11         |
| "             | <u>5209</u><br>1 | "                  | vineta..... <i>Hall.</i><br>Whitf.<br>Hall.                                                                   | T. A. I.<br>A. M. N. H.<br>Geol. Ind. | 4<br>1<br>12 | 28<br>86<br>363 | 9<br>32 | 14<br>14         |



| LOCALITY.          | REMARKS.                                                                                                         |
|--------------------|------------------------------------------------------------------------------------------------------------------|
| Bloomington, Ind.  | A comparatively large individual. Three others from this locality are in the original type series.               |
| Spergen Hill, Ind. | Eleven individuals from this locality are in the original type series.                                           |
| .....              | <i>As Holopea (Callonema?) Proutana.</i>                                                                         |
| Spergen Hill, Ind. | A large individual. Eleven others from this locality are in the original type series.                            |
| Bloomington, Ind.  | Eight individuals from this locality are in the type series.                                                     |
| Alton, Ill.        | Fourteen individuals from this locality are in the original type series.                                         |
| Spergen Hill, Ind. | Two individuals. The original of fig. 8 cannot be found at the present time.                                     |
| .....              | <i>See Murchisonia vincta.</i>                                                                                   |
| Spergen Hill, Ind. | An individual and a fragment. Another individual from the same locality is in the original type series.          |
| .....              | <i>As Natica Littonana.</i>                                                                                      |
| Bloomington, Ind.  | Generic reference queried. A single, practically entire individual.                                              |
| Spergen Hill, Ind. | Part of a well-preserved individual.                                                                             |
| .....              | <i>See Pleurotomaria elegantula.</i>                                                                             |
| Spergen Hill, Ind. | A very perfect individual. Eleven others from this locality are in the original type series.                     |
| Bloomington, Ind.  | Six individuals from this locality are in the original type series.                                              |
| Burlington, Ia.    | Parts of three individuals imbedded in limestone (bed No. 4 of C. A. White).                                     |
| Bloomington, Ind.  | Well preserved. A smaller individual from this locality is in the original series of types.                      |
| Spergen Hill, Ind. | Practically entire. Fourteen other individuals from this locality are in the original type series.               |
| " "                | An individual larger than the average. Twenty-three others from this locality are in the original type series.   |
| .....              | <i>As Loxonema vincta.</i>                                                                                       |
| Spergen Hill, Ind. | An individual preserving the lower five whorls. Three others from this locality are in the original type series. |

## Class GASTROPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.       | REFERENCE.  |          |       |       |        |
|------------------|------------------|----------------------|----------------------------------|-------------|----------|-------|-------|--------|
|                  |                  |                      |                                  | Work.       | Vol.     | P.    | Pl.   | Figs.  |
|                  |                  |                      | <b>Natica</b> Adanson.           |             |          |       |       |        |
|                  |                  |                      | <i>Carleyana</i> .....           | .....       | .....    | ..... | ..... | .....  |
|                  |                  |                      | <i>Littonana</i> .....           | .....       | .....    | ..... | ..... | .....  |
|                  |                  |                      | <b>Naticopsis</b> McCoy.         |             |          |       |       |        |
| St. L.           | $\frac{5210}{1}$ | Type.                | <i>Carleyana</i> ..... Hall.     | T. A. I.    | 4        | 31    | ..... | .....  |
|                  |                  |                      | Whitf.                           | A. M. N. H. | 1        | 71    | 8     | 26, 27 |
|                  |                  |                      | Hall.                            | Geol. Ind.  | 12       | 369   | 31    | 26, 27 |
| "                | $\frac{5210}{2}$ | "                    | " .....                          | T. A. I.    | 4        | 31    | ..... | .....  |
| "                | $\frac{5210}{3}$ | "                    | " .....                          | "           | 4        | 31    | ..... | .....  |
|                  |                  |                      | <b>Platyceras</b> Conrad.        |             |          |       |       |        |
| "                | $\frac{5211}{1}$ | "                    | <i>acutirostris</i> ..... Hall.  | T. A. I.    | 4        | 31    | ..... | .....  |
|                  |                  |                      | "                                | Geol. Ia.   | 1, pt. 2 | 665   | 23    | 14a, b |
|                  |                  |                      | Whitf.                           | A. M. N. H. | 1        | 67    | 8     | 13-15  |
|                  |                  |                      | Hall.                            | Geol. Ind.  | 12       | 370   | 31    | 13-15  |
| "                | $\frac{5211}{2}$ | "                    | " .....                          | T. A. I.    | 4        | 31    | ..... | .....  |
| Kind.            | $\frac{5212}{1}$ | "                    | <i>bivolve</i> ..... W. & W.     | B. S. N. H. | 8        | 302   | ..... | .....  |
| Keok.            | $\frac{5213}{1}$ | "                    | <i>equilaterale</i> ..... Hall.  | Ia. Sup.    | .....    | 89    | ..... | .....  |
| "                | $\frac{5214}{1}$ | "                    | <i>fissurella</i> .....          | "           | .....    | 90    | ..... | .....  |
| Kind.            | $\frac{5215}{1}$ | "                    | <i>paralium</i> ..... W. & W.    | B. S. N. H. | 8        | 302   | ..... | .....  |
|                  |                  |                      | <b>Pleurotomaria</b> Defrance.   |             |          |       |       |        |
|                  |                  |                      | <i>concava</i> .....             | .....       | .....    | ..... | ..... | .....  |
| St. L.           | $\frac{5216}{1}$ | Type.                | <i>conula</i> ..... Hall.        | T. A. I.    | 4        | 26    | ..... | .....  |
|                  |                  |                      | Whitf.                           | A. M. N. H. | 1        | 84    | 9     | 17     |
|                  |                  |                      | Hall.                            | Geol. Ind.  | 12       | 358   | 32    | 17     |
| "                | $\frac{5217}{1}$ | "                    | <i>elegantula</i> ..... Hall.    | T. A. I.    | 4        | 27    | ..... | .....  |
|                  |                  |                      | Whitf.                           | A. M. N. H. | 1        | 84    | 9     | 19     |
|                  |                  |                      | Hall.                            | Geol. Ind.  | 12       | 358   | 32    | 19     |
| "                | $\frac{5218}{1}$ | "                    | <i>humilis</i> ..... Hall.       | T. A. I.    | 4        | 21    | ..... | .....  |
|                  |                  |                      | Whitf.                           | A. M. N. H. | 1        | 82    | 9     | 3      |
|                  |                  |                      | Hall.                            | Geol. Ind.  | 12       | 353   | 32    | 3      |
| "                | $\frac{5218}{2}$ | "                    | " .....                          | T. A. I.    | 4        | 21    | ..... | .....  |
|                  |                  |                      | <i>Leavenworthana</i> .....      | .....       | .....    | ..... | ..... | .....  |
| St. L.           | $\frac{5219}{1}$ | Type.                | <i>Meekana</i> ..... Hall.       | T. A. I.    | 4        | 22    | ..... | .....  |
|                  |                  |                      | Whitf.                           | A. M. N. H. | 1        | 82    | 9     | 8, 9   |
|                  |                  |                      | Hall.                            | Geol. Ind.  | 12       | 353   | 32    | 8, 9   |
| "                | $\frac{5220}{1}$ | "                    | <i>nodulostriata</i> ..... Hall. | T. A. I.    | 4        | 21    | ..... | .....  |
|                  |                  |                      | Whitf.                           | A. M. N. H. | 1        | 80    | 9     | 5      |
|                  |                  |                      | Hall.                            | Geol. Ind.  | 12       | 352   | 32    | 5      |
| "                | $\frac{5220}{2}$ | "                    | " .....                          | T. A. I.    | 4        | 21    | ..... | .....  |
| "                | $\frac{5220}{3}$ | "                    | " .....                          | "           | 4        | 21    | ..... | .....  |
| "                | $\frac{5221}{1}$ | "                    | <i>piasensis</i> ..... Hall.     | "           | 4        | 22    | ..... | .....  |
|                  |                  |                      | Whitf.                           | A. M. N. H. | 1        | 83    | 9     | 6, 7   |
|                  |                  |                      | Hall.                            | Geol. Ind.  | 12       | 354   | 32    | 6, 7   |



| LOCALITY.          | REMARKS.                                                                                                                                                                                   |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....              | See <i>Naticopsis Carlevana</i> .                                                                                                                                                          |
| .....              | “ <i>Macrocheilus Littonanus</i> .                                                                                                                                                         |
| .....              | As <i>Natica Carleyana</i> .                                                                                                                                                               |
| Bloomington, Ind.  | A very large individual. Nine much smaller ones from this locality are in the original type series.                                                                                        |
| Spergen Hill, Ind. | As <i>Natica Carleyana</i> . Twelve individuals from this locality are in the original type series.                                                                                        |
| Alton, Ill.        | As <i>Natica Carleyana</i> . Two worn specimens from this locality are in the original type series.                                                                                        |
| .....              | As <i>Capulus acutirostris</i> .                                                                                                                                                           |
| .....              | “ “ “                                                                                                                                                                                      |
| Bloomington, Ind.  | Two individuals, but the second, which was illustrated in fig. 15 and the Iowa report, cannot be found at the present time. Two others from this locality are in the original type series. |
| Spergen Hill, Ind. | As <i>Capulus acutirostris</i> . Three individuals from this locality are in the type series.                                                                                              |
| Burlington, Ia.    | Casts of two individuals.                                                                                                                                                                  |
| Warsaw, Ill.       | A small individual.                                                                                                                                                                        |
| Keokuk, Ia.        | A large individual which was one of the original types, though the locality is not mentioned in the original description of the species.                                                   |
| Burlington, Ia.    | Two casts of average individuals.                                                                                                                                                          |
| .....              | See <i>Eotrochus concavus</i> .                                                                                                                                                            |
| .....              | As <i>Pleurotomaria (Murchisonia ?) conula</i> .                                                                                                                                           |
| Spergen Hill, Ind. | A rather large individual for the species. Seven others from this locality are in the original type series.                                                                                |
| .....              | As <i>Murchisonia elegantula</i> .                                                                                                                                                         |
| Bloomington, Ind.  | An individual preserving about five volutions.                                                                                                                                             |
| Spergen Hill, Ind. | A small individual. Four other individuals and fragments from this locality are in the original type series.                                                                               |
| Bloomington, Ind.  | An individual from this locality is in the original type series.                                                                                                                           |
| .....              | See <i>Cyclonema Leavenworthanum</i> .                                                                                                                                                     |
| .....              | Generic reference queried.                                                                                                                                                                 |
| Alton, Ill.        | An imperfect individual, somewhat exfoliated. Not from Spergen Hill, as stated in the original paper.                                                                                      |
| Spergen Hill, Ind. | An individual of average size. Ten others from this locality are in the original series of types.                                                                                          |
| Bloomington, Ind.  | Two individuals from this locality are in the original series of types.                                                                                                                    |
| Alton, Ill.        | An individual from this locality is in the original series of type.                                                                                                                        |
| “                  | A somewhat imperfect individual. Ten other individuals from this locality are in the original type series.                                                                                 |

Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.       | REFERENCE.  |          |       |       |       |
|---------------|------------------|-------------------|----------------------------------|-------------|----------|-------|-------|-------|
|               |                  |                   |                                  | Work.       | Vol.     | P.    | Pl.   | Figs. |
| St. L.        | <u>5222</u><br>1 | Type.             | <b>Pleurotomaria</b> Defr.—Cont. |             |          |       |       |       |
|               |                  |                   | <i>rotundata</i> .....           | .....       | .....    | ..... | ..... | ..... |
|               |                  |                   | <i>subangulata</i> .....         | .....       | .....    | ..... | ..... | ..... |
|               |                  |                   | <i>subglobosa</i> .....Hall.     | Am. P. F.   | .....    | 245   |       |       |
|               |                  |                   | “                                | T. A. I.    | 4        | 23    | ..... | ..... |
|               |                  |                   | Whitf.                           | A. M. N. H. | 1        | 79    | 9     | 10    |
|               |                  |                   | Hall.                            | Geol. Ind.  | 12       | 355   | 32    | 10    |
|               |                  |                   | “                                | T. A. I.    | 4        | 23    | ..... | ..... |
|               |                  |                   | “                                | “           | 4        | 23    | ..... | ..... |
|               |                  |                   | Swallovana.....                  | “           | 4        | 24    |       |       |
| St. L.        | <u>5223</u><br>1 | Type.             | Whitf.                           | A. M. N. H. | 1        | 80    | 9     | 1, 2  |
|               |                  |                   | Hall.                            | Geol. Ind.  | 12       | 356   | 32    | 1, 2  |
|               |                  |                   | “                                | T. A. I.    | 4        | 24    | ..... | ..... |
|               |                  |                   | <i>tenuimarginata</i> .....      | .....       | .....    | ..... | ..... | ..... |
|               |                  |                   | <i>trilineata</i> .....Hall.     | T. A. I.    | 4        | 25    |       |       |
|               |                  |                   | Whitf.                           | A. M. N. H. | 1        | 80    | 9     | 20    |
|               |                  |                   | Hall.                            | Geol. Ind.  | 12       | 357   | 32    | 20    |
|               |                  |                   | “                                | T. A. I.    | 4        | 25    | ..... | ..... |
|               |                  |                   | Wortheni.....Hall.               | “           | 4        | 23    |       |       |
|               |                  |                   | “                                | Geol. Ia.   | 1, pt. 2 | 664   | 23    | 13a-d |
| St. L.        | <u>5224</u><br>1 | Type.             | Whitf.                           | A. M. N. H. | 1        | 81    | 9     | 4     |
|               |                  |                   | Hall.                            | Geol. Ind.  | 12       | 356   | 32    | 4     |
|               |                  |                   | <b>Polyphemopsis</b> Portlock.   |             |          |       |       |       |
|               |                  |                   | <i>teretiformis</i> .....        | .....       | .....    | ..... | ..... | ..... |
|               |                  |                   |                                  |             |          |       |       |       |
|               |                  |                   |                                  |             |          |       |       |       |
|               |                  |                   |                                  |             |          |       |       |       |
|               |                  |                   |                                  |             |          |       |       |       |
|               |                  |                   |                                  |             |          |       |       |       |
|               |                  |                   |                                  |             |          |       |       |       |
|               |                  |                   |                                  |             |          |       |       |       |

Class PTEROPODA.

|        |                  |       |                            |             |    |     |    |   |
|--------|------------------|-------|----------------------------|-------------|----|-----|----|---|
| St. L. | <u>5226</u><br>1 | Type. | <b>Conularia.</b>          |             |    |     |    |   |
|        |                  |       | <i>subulata</i> .....Hall. | T. A. I.    | 4  | 32  |    |   |
|        |                  |       | Whitf.                     | A. M. N. H. | 1  | 91  | 8  | 3 |
|        |                  |       | Hall.                      | Geol. Ind.  | 12 | 372 | 31 | 3 |

Class CEPHALOPODA.

|       |                  |       |                            |              |                  |       |       |        |
|-------|------------------|-------|----------------------------|--------------|------------------|-------|-------|--------|
| Kind. | <u>5227</u><br>1 | Type. | <b>Goniatites</b> de Haan. |              |                  |       |       |        |
|       |                  |       | <i>hyas</i> .....          | .....        | .....            | ..... | ..... | .....  |
|       |                  |       | <i>ixion</i> .....Hall.    | N. Y. S. M.  | 13               | 101   | ..... | 15, 16 |
|       |                  |       | “                          | “            | 13               | 125   | ..... | 1, 2   |
|       |                  |       | “                          | I. D. F.     | Ceph.            | ..... | 73    | 13, 14 |
|       |                  |       | “                          | Pal. N. Y.   | 5, pt. 2         | 474   | 74    | 12     |
|       |                  |       | “                          | “            | “                | “     | 73    | 13, 14 |
|       |                  |       | “                          | I. D. F.     | Ceph.            | ..... | 73    | 12     |
|       |                  |       | “                          | Pal. N. Y.   | 5, pt. 2         | 474   | 73    | 12     |
|       |                  |       | “                          | St. G. N. Y. | 5                | ..... | 13    | 3      |
| “     | “                | “     | “                          | Pal. N. Y.   | 5, pt. 2, Suppl. | 40    | 128   | 3      |
|       |                  |       | “                          | “            | “                | “     | “     | “      |



| LOCALITY.          | REMARKS.                                                                                                                                                   |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....              | Name pre-occupied. See <i>Pleurotomaria subglobosa</i> .                                                                                                   |
| .....              | See <i>Cyclonema subangulatum</i> .                                                                                                                        |
| .....              | As type of <i>Pleurotomaria rotundata</i> Hall.                                                                                                            |
| Spergen Hill, Ind. | An individual. Thirteen other individuals from this locality are in the original series of types.                                                          |
| Bloomington, Ind.  | As type of <i>Pleurotomaria rotundata</i> Hall. Two individuals from this locality are in the original type series.                                        |
| Alton, Ill.        | As type of <i>Pleurotomaria rotundata</i> Hall. Three individuals from this locality are in the original type series.                                      |
| Spergen Hill, Ind. | A small individual. The aperture in the figure was supplied from other specimens. Nine other specimens from this locality are in the original type series. |
| Bloomington, Ind.  | Four specimens from this locality are in the original type series.                                                                                         |
| .....              | See <i>Eotrochus concavus</i> .                                                                                                                            |
| “ “                | An individual of average size. The enlargement was to 4, not 3, diameters. Nine other specimens from this locality are in the original type series.        |
| Spergen Hill, Ind. | One very large individual and seven of average size from this locality are in the original type series.                                                    |
| Bloomington, Ind.  | An individual of medium size. Two others from this locality are in the type series.                                                                        |
| .....              | See <i>Bulimorpha elongata</i> .                                                                                                                           |
| Alton, Ill.        | Three specimens form the type series.                                                                                                                      |
| .....              | See <i>Goniatites Lyoni</i> .                                                                                                                              |
| .....              | As <i>Goniatites rotatorius</i> de Koninck?                                                                                                                |
| Rockford, Ind.     | Cast of septate portion. From the “Goniatite beds.”                                                                                                        |
| “ “                | Fragmentary, septate cast. From the “Goniatite beds.”                                                                                                      |
| “ “                | A cast of medium size cut in longitudinal section. Both parts are present. From the “Goniatite beds.”                                                      |

Class CEPHALOPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                   | REFERENCE.   |                     |       |        |        |
|------------------|------------------|----------------------|----------------------------------------------|--------------|---------------------|-------|--------|--------|
|                  |                  |                      |                                              | Work.        | Vol.                | P.    | Pl.    | Figs.  |
| Kind.            | <u>5228</u><br>1 | Fig'd.               | <b>Goniatites</b> de Haan— <i>Cont.</i>      |              |                     |       |        |        |
|                  |                  |                      | Lyoni ( <i>M. &amp; W.</i> )... <i>Hall.</i> | I. D. F.     | Ceph.               | ....  | 72     | 12     |
|                  |                  |                      | " " "                                        | Pal. N. Y.   | 5, pt. 2            | 476   | 72     | 12     |
|                  |                  |                      | " " "                                        | N. Y. S. M.  | 13                  | 102   | ...    | 17, 18 |
|                  |                  |                      | " " "                                        | I. D. F.     | Ceph.               | ....  | 73     | 9      |
|                  |                  |                      | " " "                                        | Pal. N. Y.   | 5, pt. 2            | 476   | 73     | 9      |
|                  | <u>5229</u><br>1 | Type.                | " " "                                        | I. D. F.     | Ceph.               | ....  | 73     | 10, 11 |
|                  |                  |                      | " " "                                        | Pal. N. Y.   | 5, pt. 2            | 476   | 73     | 10, 11 |
|                  |                  |                      | " " "                                        | " " "        | " " "               | " " " | 74     | 7      |
|                  |                  |                      | opimus..... <i>W. &amp; W.</i>               | B. S. N. H.  | 8                   | 305   | ....   | ....   |
|                  |                  |                      | " " "                                        | " " "        | " " "               | " " " | " " "  | " " "  |
|                  |                  |                      | Oweni..... <i>Hall.</i>                      | N. Y. S. M.  | 13                  | 100   | ....   | 11, 12 |
| St. L.           | <u>5230</u><br>1 | "                    | " " "                                        | I. D. F.     | Ceph.               | ....  | 73     | 3, 4   |
|                  |                  |                      | " " "                                        | " " "        | " " "               | " " " | 74     | 9      |
|                  |                  |                      | " " "                                        | Pal. N. Y.   | 5, pt. 2            | 470   | 73     | 3, 4   |
|                  |                  |                      | " " "                                        | " " "        | " " "               | " " " | 74     | 9      |
|                  |                  |                      | " " "                                        | I. D. F.     | Ceph.               | ....  | 73     | 5-8    |
|                  |                  |                      | " " "                                        | Pal. N. Y.   | 5, pt. 2            | 470   | 73     | 5-8    |
|                  | <u>5231</u><br>1 | "                    | " " "                                        | St. G. N. Y. | 5                   | ....  | 13     | 4      |
|                  |                  |                      | " " "                                        | Pal. N. Y.   | 5, pt. 2,<br>Suppl. | 40    | 128    | 4      |
|                  |                  |                      | " " <i>var. parallela</i> <i>Hall.</i>       | N. Y. S. M.  | 13                  | 100   | p. 101 | 13, 14 |
|                  |                  |                      | " " "                                        | I. D. F.     | Ceph.               | ....  | 73     | 1, 2   |
|                  |                  |                      | " " "                                        | " " "        | " " "               | " " " | 74     | 10     |
|                  |                  |                      | " " "                                        | Pal. N. Y.   | 5, pt. 2            | 473   | 73     | 1, 2   |
| Kind.            | <u>5232</u><br>1 | Type.                | <i>rotatorius</i> H. (non de Kon)            | ....         | ....                | ....  | ....   | ....   |
|                  |                  |                      | <b>Gyroceras</b> de Koninck.                 |              |                     |       |        |        |
|                  |                  |                      | gracile..... <i>Hall.</i>                    | N. Y. S. M.  | 13                  | 105   | ....   | 1, 2   |
|                  |                  |                      | <b>Nautilus</b> Breynius.                    |              |                     |       |        |        |
|                  |                  |                      | Clarkanus..... <i>Hall</i>                   | T. A. I.     | 4                   | 32    |        |        |
|                  |                  |                      | " " " <i>Whitf.</i>                          | A. M. N. H.  | 1                   | 92    | 8      | 1      |
|                  | <u>5234</u><br>1 | "                    | " " " <i>Hall.</i>                           | Geol. Ind.   | 12                  | 373   | 31     | 1      |
|                  |                  |                      | pauper..... <i>Whitf.</i>                    | N. Y. A. S.  | 2                   | 226   |        |        |
|                  |                  |                      | " " "                                        | " " "        | 5                   | 595   | 14     | 23     |
|                  |                  |                      | " " "                                        | Geol. O.     | 7                   | 481   | 10     | 23     |
|                  |                  |                      | <b>(Temnocheilus)</b>                        |              |                     |       |        |        |
|                  |                  |                      | spectabilis ( <i>M. &amp; W.</i> ) <i>W.</i> | N. Y. A. S.  | 5                   | 594   | 14     | 22     |
| St. L.           | <u>5235</u><br>1 | Fig'd.               | " " "                                        | Geol. O.     | 7                   | 480   | 10     | 22     |
|                  |                  |                      | <b>Orthoceras</b> Breynius.                  |              |                     |       |        |        |
|                  |                  |                      | <i>dædalus</i> .....                         | ....         | ....                | ....  | ....   | ....   |
|                  |                  |                      | epigrus..... <i>Hall.</i>                    | T. A. I.     | 4                   | 33    |        |        |
|                  |                  |                      | " " " <i>Whitf.</i>                          | A. M. N. H.  | 1                   | 91    | 8      | 2      |
|                  |                  |                      | " " " <i>Hall.</i>                           | Geol. Ind.   | 12                  | 373   | 31     | 2      |
|                  | <u>5237</u><br>1 | "                    | icarus..... <i>Hall.</i>                     | St. G. N. Y. | 5                   | ....  | 2      | 11-15  |
|                  |                  |                      | " " "                                        | Pal. N. Y.   | 5, pt. 2,<br>Suppl. | 31    | 118    | 11-15  |
|                  |                  |                      | " " "                                        | N. Y. S. M.  | 13                  | 107   |        |        |
|                  |                  |                      | indianense..... <i>Hall.</i>                 | St. G. N. Y. | 5                   | ....  | 2      | 6-10   |
|                  |                  |                      | " " "                                        | Pal. N. Y.   | 5, pt. 2,<br>Suppl. | 30    | 118    | 6-10   |
|                  |                  |                      | " " "                                        | " " "        | " " "               | " " " | " " "  | " " "  |



| LOCALITY.               | REMARKS.                                                                                                                                                                                                                                              |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rockford, Ind.<br>..... | Segment of cast of large individual. From the "Goniatite beds."<br>As type of <i>Goniatites hyas</i> Hall.                                                                                                                                            |
| Rockford, Ind.          | Cast of part of two volutions. From the "Goniatite beds."                                                                                                                                                                                             |
| " "<br>Burlington, Ia.  | Two fragmentary casts. From the "Goniatite beds."<br>Fragmentary, septate cast, imbedded. The sutures are entirely<br>different from those in the large specimen referred to this species<br>by Weller, Trans. Acad. Sci., St. Louis, vol. 10, pl. 8. |
| Rockford, Ind.          | Cast showing the sutures very plainly. From the "Goniatite<br>beds."                                                                                                                                                                                  |
| " "                     | Two small, septate casts and two large specimens showing no<br>septa.                                                                                                                                                                                 |
| " "                     | A large individual cut in longitudinal section. Both parts are<br>present. From the "Goniatite beds."                                                                                                                                                 |
| " "<br>.....            | Cast. From the "Goniatite beds."<br>See <i>Goniatites ixion</i> .                                                                                                                                                                                     |
| Rockford, Ind.          | A septate cast from the "Goniatite beds."                                                                                                                                                                                                             |
| Spergen Hill, Ind.      | The specimen shows about two of the inner whorls of a shell.                                                                                                                                                                                          |
| Near Rushville, O.      | Fragmentary, internal cast, imbedded.                                                                                                                                                                                                                 |
| " "<br>.....            | Part of a septate, internal cast.<br><br>See <i>Orthoceras indianense</i> .                                                                                                                                                                           |
| Spergen Hill, Ind.      | A fragment showing five chambers.                                                                                                                                                                                                                     |
| Rockford, Ind.<br>..... | Three fragmentary casts from the "Goniatite beds."<br><br>As type of <i>Orthoceras dædalus</i> .                                                                                                                                                      |
| Rockford, Ind.          | Four fragmentary casts from the "Goniatite beds."                                                                                                                                                                                                     |

Subkingdom VERMES.

| Geol.<br>Subdiv | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.   | REFERENCE.  |      |     |      |       |
|-----------------|------------------|----------------------|------------------------------|-------------|------|-----|------|-------|
|                 |                  |                      |                              | Work        | Vol. | P.  | Pl.  | Figs. |
| St. L.          | $\frac{5239}{1}$ | Type.                | <b>Spirorbis</b> Lamarck.    |             |      |     |      |       |
|                 |                  |                      | annulatus.....Hall.          | T. A. I.    | 4    | 34  |      |       |
|                 |                  |                      | Whitf.                       | A. M. N. H. | 1    | 92  | 9    | 30    |
|                 |                  |                      | Hall.                        | Geol. Ind.  | 12   | 374 | 32   | 30    |
| "               | $\frac{5239}{2}$ | "                    | " .....                      | T. A. I.    | 4    | 34  | .... | ....  |
| "               | $\frac{5239}{3}$ | "                    | " .....                      | "           | 4    | 34  | .... | ....  |
|                 |                  |                      | " var. <i>nodulosus</i> . .. |             |      |     |      |       |
| St. L.          | $\frac{5240}{1}$ | Type.                | nodulosus.....Hall.          | T. A. I.    | 4    | 34  | .... | ....  |
|                 |                  |                      | Whitf.                       | A. M. N. H. | 1    | 93  | 9    | 31    |
|                 |                  |                      | Hall.                        | Geol. Ind.  | 12   | 375 | 32   | 31    |

Subkingdom ARTHROPODA.

Class

|        |                  |       |                                   |             |    |      |      |        |
|--------|------------------|-------|-----------------------------------|-------------|----|------|------|--------|
| St. L. | $\frac{5241}{1}$ | Type. | <b>Cythere</b> Müller.            |             |    |      |      |        |
|        |                  |       | <i>carbonaria</i> .....           |             |    |      |      |        |
|        |                  |       |                                   |             |    |      |      |        |
|        |                  |       | <b>Cytherellina</b> Jones & Holl. |             |    |      |      |        |
|        |                  |       | glandella.....Whitf.              | A. M. N. H. | 1  | 94   | 9    | 28, 29 |
|        |                  |       | Hall.                             | Geol. Ind.  | 12 | .... | 32   | 28, 29 |
| "      | $\frac{5242}{1}$ | "     | <b>Leperditia</b> Rouault.        |             |    |      |      |        |
|        |                  |       | <i>carbonaria</i> .....Hall.      | T. A. I.    | 4  | 33   | .... | ....   |
|        |                  |       | Whitf.                            | A. M. N. H. | 1  | 94   | 9    | 24-27  |
|        |                  |       | Hall.                             | Geol. Ind.  | 12 | 375  | 32   | 24-27  |
| "      | $\frac{5242}{2}$ | "     | " .....                           | T. A. I.    | 4  | 33   | .... | ....   |

Order TRILOBITA.

|       |                  |       |                                   |             |    |     |      |      |
|-------|------------------|-------|-----------------------------------|-------------|----|-----|------|------|
| Kind. | $\frac{5243}{1}$ | Fig'd | <b>Protëus</b> Steininger.        |             |    |     |      |      |
|       |                  |       | <i>auriculatus</i> .....          |             |    |     |      |      |
|       |                  |       |                                   |             |    |     |      |      |
|       |                  |       | missouriensis( <i>Shum.</i> )..H. | N. Y. S. M. | 15 | 107 | .... | .... |
|       |                  |       | "                                 | Pal. N. Y.  | 7  | 133 | 23   | 32   |



Class ANNELIDA.

| LOCALITY.          | REMARKS.                                                                        |
|--------------------|---------------------------------------------------------------------------------|
| Alton, Ill.        | An individual. Eight others from this locality are in the original type series. |
| Spergen Hill, Ind. | Five individuals from this locality are in the original type series.            |
| Bloomington, Ind.  | Three individuals from this locality are in the original type series.           |
| .....              | See <i>Spirorbis nodulosus</i> .                                                |
| .....              | As <i>Spirorbis annulatus</i> var. <i>nodulosus</i> .                           |
| Spergen Hill, Ind. | A single individual.                                                            |

CRUSTACEA.

Order OSTRACODA.

|                    |                                                                                                            |
|--------------------|------------------------------------------------------------------------------------------------------------|
| .....              | See <i>Leperditia carbonaria</i> .                                                                         |
| Spergen Hill, Ind. | An individual. Three others are in the original series of types.                                           |
| .....              | As <i>Cythere carbonaria</i> .                                                                             |
| Spergen Hill, Ind. | An individual. Seventeen others from this locality are in the original type series.                        |
| Bloomington, Ind.  | As <i>Cythere carbonaria</i> . Twenty-four individuals from this locality are in the original type series. |

|                 |                                                                                                                   |
|-----------------|-------------------------------------------------------------------------------------------------------------------|
| .....           | See <i>Proëtus missouriensis</i> .                                                                                |
| .....           | As type of <i>Proëtus auriculatus</i> Hall.                                                                       |
| Licking Co., O. | Part of the exterior imprint of a cephalon and the cast of a pygidium referred to under the original description. |

Coal Measures.

Kingdom ANIMALIA.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                    | REFERENCE.   |          |       |       |                   |
|------------------|------------------|----------------------|-----------------------------------------------|--------------|----------|-------|-------|-------------------|
|                  |                  |                      |                                               | Work.        | Vol.     | P.    | Pl.   | Figs.             |
| C. M.            | <u>5247</u><br>1 | Fig'd.               | <b>Derbya</b> Waagen.                         |              |          |       |       |                   |
|                  |                  |                      | crassa ( <i>M. &amp; H.</i> )... <i>Hall.</i> | St. G. N. Y. | 2        | ....  | 40    | 10, 11            |
|                  | <u>5248</u><br>1 | Type.                | <i>H. &amp; C.</i>                            | Pal. N. Y.   | 8, pt. 1 | 262   | 10    | 10, 11            |
|                  |                  |                      | robusta..... <i>Hall.</i>                     | St. G. N. Y. | 2        | ....  | 40    | 16, 17            |
| "                |                  |                      | <i>H. &amp; C.</i>                            | Pal. N. Y.   | 8, pt. 1 | 262   | 10    | 16, 17            |
|                  |                  |                      |                                               |              |          |       |       |                   |
|                  | <u>5249</u><br>1 | Fig'd.               | <b>Meekella</b> W. & St. J.                   |              |          |       |       |                   |
|                  |                  |                      | striato-costata ( <i>Cox</i> ) <i>Hall.</i>   | St. G. N. Y. | 2        | ..    | 40    | 18, 22            |
| "                |                  |                      | <i>H. &amp; C.</i>                            | " "          | 11       | ....  | 17    | 13, <i>enl.</i>   |
|                  |                  |                      | "                                             | Pal. N. Y.   | 8, pt. 1 | 265   | 10    | 18, 22            |
|                  |                  |                      |                                               |              |          |       |       |                   |
|                  |                  |                      |                                               |              |          |       |       |                   |
| C. M.            | <u>5250</u><br>1 | Fig'd.               | <b>Productus</b> Sowerby.                     |              |          |       |       |                   |
|                  |                  |                      | <i>aspersus</i> .....                         | .....        | .....    | ..... | ..... | .....             |
|                  |                  |                      | <i>longispinus</i> .....                      | .....        | .....    | ..... | ..... | .....             |
|                  |                  |                      | nebrascensis ( <i>Owen</i> ) <i>Hall.</i>     | St. G. N. Y. | 2        | ....  | 50    | 5-7               |
| "                |                  |                      | <i>H. &amp; C.</i>                            | " "          | 11       | ....  | 22    | 7, <i>v.v.</i>    |
|                  |                  |                      | "                                             | Pal. N. Y.   | 8, pt. 1 | ....  | 19    | 5-7               |
|                  | <u>5251</u><br>1 | "                    | punctatus ( <i>Martin</i> )?.. <i>H.</i>      | St. G. N. Y. | 2        | ....  | 50    | 17, 18            |
|                  |                  |                      | <i>H. &amp; C.</i>                            | " "          | 11       | ....  | 22    | 9, 10             |
| C. M.            | <u>5252</u><br>1 | Fig'd.               | "                                             | Pal. N. Y.   | 8, pt. 1 | ....  | 19    | 17, 18            |
|                  |                  |                      | <i>Rogersi</i> .....                          | .....        | .....    | ..... | ..... | .....             |
|                  |                  |                      | splendens ( <i>N. &amp; P.</i> ) <i>Hall.</i> | St. G. N. Y. | 2        | ....  | 50    | 1-3               |
|                  |                  |                      | <i>H. &amp; C.</i>                            | " "          | 11       | ....  | 22    | 13                |
| "                |                  |                      | "                                             | Pal. N. Y.   | 8, pt. 1 | 332   | 19    | 1-3               |
|                  |                  |                      | " " <i>Hall.</i>                              | St. G. N. Y. | 2        | ....  | 50    | 4, <i>int</i> x 2 |
|                  | <u>5253</u><br>2 | "                    | <i>H. &amp; C.</i>                            | " "          | 11       | ....  | 22    | 14, "             |
|                  |                  |                      | "                                             | Pal. N. Y.   | 8, pt. 1 | 332   | 19    | 4, "              |
| "                |                  |                      | <b>Spirifer</b> Sowerby.                      |              |          |       |       |                   |
|                  |                  |                      | cameratus ( <i>Morton</i> ) <i>Hall.</i>      | St. G. N. Y. | 2        | ....  | 57    | 9, 10             |
|                  |                  |                      | <i>H. &amp; C.</i>                            | " "          | 13       | ....  | 26    | 7, <i>d. v.</i>   |
|                  |                  |                      | "                                             | Pal. N. Y.   | 8, pt. 2 | ....  | 32    | 9, 10             |
| "                | <u>5254</u><br>2 | "                    | " " <i>Hall.</i>                              | St. G. N. Y. | 2        | ....  | 57    | 12                |
|                  |                  |                      | <i>H. &amp; C.</i>                            | Pal. N. Y.   | 8, pt. 2 | 26    | 32    | 12                |
|                  |                  |                      | <b>Streptorhynchus</b> King.                  |              |          |       |       |                   |
|                  |                  |                      | <i>Richmondi</i> .....                        | .....        | .....    | ..... | ..... | .....             |
|                  |                  |                      | <i>robustus</i> .....                         | .....        | .....    | ..... | ..... | .....             |
|                  |                  |                      | <i>striato-costata</i> .....                  | .....        | .....    | ..... | ..... | .....             |

Subkingdom MOLLUSCA.

|       |                  |        |                                                     |               |          |       |       |                  |
|-------|------------------|--------|-----------------------------------------------------|---------------|----------|-------|-------|------------------|
| C. M. | <u>5253</u><br>1 | Type.  | <b>Leda</b> Schumacher.                             |               |          |       |       |                  |
|       |                  |        | <i>bellistriata</i> .....                           | .....         | .....    | ..... | ..... | .....            |
|       |                  |        | <b>Nucula</b> Lamarck.                              |               |          |       |       |                  |
|       |                  |        | <i>arata</i> .....                                  | .....         | .....    | ..... | ..... | .....            |
| "     | <u>5254</u><br>1 | Fig'd. | <i>ventricosa</i> ..... <i>Hall.</i>                | Geol. Ia.     | 1, pt. 2 | 716   | 29    | 4-5 <sup>b</sup> |
|       |                  |        |                                                     |               |          |       |       |                  |
|       | <u>5254</u><br>2 | "      | <b>Nuculana</b> Link.                               |               |          |       |       |                  |
|       |                  |        | <i>bellistriata</i> ( <i>Stevens</i> ) <i>Hall.</i> | Stans. Rep't. | .....    | 413   | 2     | 5 a, b           |
| "     |                  |        | " " "                                               | Geol. Ia.     | 1, pt. 2 | 717   | 29    | 6a-d             |
|       |                  |        |                                                     |               |          |       |       |                  |



MOLLUSCOIDEA.

Class BRACHIOPODA.

| LOCALITY.           | REMARKS.                                                               |
|---------------------|------------------------------------------------------------------------|
| .....               | As <i>Streptorhynchus Richmondi</i> McChesney.                         |
| Near Winterset, Ia. | Two separated, opposite valves.                                        |
| .....               | As <i>Streptorhynchus robustus</i> .                                   |
| St. Clair Co., Ill. | A large ventral valve.                                                 |
| .....               | As <i>Streptorhynchus (Meekella) striato-costata</i> .                 |
| Near Winterset, Ia. | An indiv. of med. size and a preparation showing the cardinal process. |
| .....               | See <i>Productus nebrascensis</i> .                                    |
| .....               | “ “ <i>splendens</i> .                                                 |
| .....               | As <i>Productus aspersus</i> McChesney.                                |
| La Salle, Ill.      | Two individuals.                                                       |
| .....               | As <i>Productus Rogersi</i> N. & P.                                    |
| ?                   | A partly exfoliated ventral valve.                                     |
| .....               | See <i>Productus punctatus</i> .                                       |
| .....               | As <i>Productus longispinus</i> Sowerby.                               |
| .....               | “ “ ( <i>Marginifera</i> ) <i>splendens</i> .                          |
| Winterset, Ia.      | “ “ Entire.                                                            |
| .....               | “ “ <i>longispinus</i> Sowerby.                                        |
| .....               | “ “ ( <i>Marginifera</i> ) <i>splendens</i> .                          |
| La Salle, Ill.      | “ “ “ “ A dorsal valve.                                                |
| Winterset, Ia.      | A well preserved individual, partly silicified.                        |
| Ohio or Illinois.   | A somewhat exfoliated individual.                                      |
| .....               | See <i>Derbya crassa</i> .                                             |
| .....               | “ “ <i>robusta</i> .                                                   |
| .....               | “ <i>Meekella striato-costata</i> .                                    |

Class LAMELLIBRANCHIATA.

|                  |                                                                                                                                               |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| .....            | See <i>Nuculana bellistriata</i> .                                                                                                            |
| .....            | “ “ “                                                                                                                                         |
| Rush Creek, Ind. | A very perfect left valve and an entire individual.                                                                                           |
| Near Weston, Mo. | As type of <i>Nucula arata</i> Hall. An individual with posterior extremity missing. From “the east side of the Missouri river below Weston.” |
| Illinois.        | As <i>Leda bellastriata</i> . A nearly entire individual and a large right valve with posterior extremity gone.                               |

Class GASTROPODA.

| Geol. Subdiv. | Cat No.          | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                                   | REFERENCE.         |          |       |       |        |
|---------------|------------------|--------------------|------------------------------------------------------------------------------|--------------------|----------|-------|-------|--------|
|               |                  |                    |                                                                              | Work.              | Vo.      | P.    | Pl.   | Figs.  |
| C. M.         | $\frac{5255}{1}$ | Gen. and Sp. Type. | <b>Anthracopupa</b> Whitfield.<br>ohioensis..... <i>Whitf.</i>               | Am. J. S. Geol. O. | III, 21  | 126   | ....  | 1-4    |
|               |                  |                    | “                                                                            | “                  | 7        | 491   | 12    | 15-17  |
| “             | $\frac{5256}{1}$ | Fig'd.             | <b>Euomphalus</b> Sowerby.<br>catilloides ( <i>Conrad</i> ) <i>Hall.</i>     | Geol. Ia.          | I, pt. 2 | 722   | 29    | 14a-c  |
| “             | $\frac{5256}{2}$ | “                  | “                                                                            | “                  | I, pt. 2 | 722   | 29    | 14d    |
|               |                  |                    | <i>rugosus</i> .....                                                         | .....              | .....    | ..... | ..... | .....  |
|               |                  |                    | <b>Macrocheilus</b> Phillips.<br><i>fusiformis</i> .....                     | .....              | .....    | ..... | ..... | .....  |
|               |                  |                    | <i>newberryi</i> .....                                                       | .....              | .....    | ..... | ..... | .....  |
|               |                  |                    | <i>paludinæformis</i> .....                                                  | .....              | .....    | ..... | ..... | .....  |
| C. M.         | $\frac{5257}{1}$ | Fig'd.             | primigenium ( <i>Con.</i> ) <i>Hall.</i>                                     | Geol. Ia.          | I, pt. 2 | 720   | 29    | 11a, b |
|               |                  |                    | <i>ventricosus</i> .....                                                     | .....              | .....    | ..... | ..... | .....  |
|               |                  |                    | <b>Pleurotomaria</b> Defrance.<br>sphærulata ( <i>Con.</i> )... <i>Hall.</i> | Geol. Ia.          | I, pt. 2 | 722   | 29    | 13a, b |
| “             | $\frac{5259}{1}$ | “                  | tabulata ( <i>Con.</i> )... <i>Hall.</i>                                     | “                  | I, pt. 2 | 721   | 29    | 12a, b |
|               |                  |                    | <b>Soleniscus</b> M. & W.<br><i>fusiformis</i> ..... <i>Hall.</i>            | “                  | I, pt. 2 | 718   | 29    | 7      |
| “             | $\frac{5261}{1}$ | Fig'd.             | <i>Newberryi</i> ( <i>Stevens</i> ) <i>Hall.</i>                             | “                  | I, pt. 2 | 719   | 29    | 9      |
| “             | $\frac{5262}{1}$ | Type.              | <i>paludiniformis</i> ..... <i>Hall.</i>                                     | “                  | I, pt. 2 | 719   | 29    | 10     |
| “             | $\frac{5263}{1}$ | “                  | <i>ventricosus</i> ..... <i>Hall.</i>                                        | “                  | I, pt. 2 | 718   | 29    | 8      |

Class CEPHALOPODA.

|        |                  |       |                                                          |              |                  |      |     |     |
|--------|------------------|-------|----------------------------------------------------------|--------------|------------------|------|-----|-----|
| C. M.? | $\frac{5264}{1}$ | Type. | <b>Nautilus.</b><br><i>parallelus</i> ..... <i>Hall.</i> | St. G. N. Y. | 5                | .... | II  | 3-5 |
|        |                  |       | “                                                        | Pal. N. Y.   | 5, pt. 2, Suppl. | 38   | 126 | 3-5 |

Subkingdom ARTHROPODA.

Class

|       |                  |                    |                                                   |             |        |       |       |       |
|-------|------------------|--------------------|---------------------------------------------------|-------------|--------|-------|-------|-------|
|       |                  |                    | <b>Belinurus</b> König.<br><i>Danæ</i> .....      | .....       | .....  | ..... | ..... | ..... |
| C. M. | $\frac{5265}{1}$ | Gen. and Sp. Type. | <b>Euproöps</b> Meek.<br><i>Danæ</i> .....M. & W. | P. A. N. S. | 17     | 44    | ....  | ..... |
|       |                  |                    | “                                                 | Geol. Ill.  | 2      | 395   | ....  | ..... |
|       |                  |                    | Meek.                                             | Am. J. S.   | II, 43 | 395   | ....  | ..... |

Order EURYPTERIDA.

|       |                  |        |                                                                                 |           |     |    |      |   |
|-------|------------------|--------|---------------------------------------------------------------------------------|-----------|-----|----|------|---|
| C. M. | $\frac{5266}{1}$ | Fig'd. | <b>Eurypterus</b> De Kay.<br><i>mazonensis</i> ( <i>M. &amp; W.</i> ) <i>H.</i> | Geol. Pa. | PPP | 27 | .... | 3 |
|-------|------------------|--------|---------------------------------------------------------------------------------|-----------|-----|----|------|---|



| LOCALITY.             | REMARKS.                                                                  |
|-----------------------|---------------------------------------------------------------------------|
| Marietta, O.          | An entire indiv. The figures are enlargements to six diameters.           |
| Illinois.             | As type of <i>Euomphalus rugosus</i> Hall. An entire individual.          |
| Alpine Dam,           |                                                                           |
| Des Moines River, Ia. | " " " " " " An imbedded individual.                                       |
| .....                 | See <i>Euomphalus catilloides</i> .                                       |
| .....                 | " <i>Soleniscus fusiformis</i> .                                          |
| .....                 | " " <i>Newberryi</i> .                                                    |
| .....                 | " " <i>paludiniiformis</i> .                                              |
| Alpine Dam,           |                                                                           |
| Des Moines River, Ia. | Entire.                                                                   |
| .....                 | See <i>Soleniscus ventricosus</i> .                                       |
| Greysville, Ill.      | A nearly entire individual.                                               |
| " "                   | A considerably exfoliated individual.                                     |
| Alpine Dam,           |                                                                           |
| Des Moines River, Ia. | As <i>Macrocheilus fusiformis</i> . A partly exfoliated indiv., imbedded. |
| Danville, Ill.        | " " <i>newberryi</i> . A cast in pyrite.                                  |
| Alpine Dam,           | " " <i>paludinæformis</i> . A partly exfoliated individual,               |
| Des Moines River, Ia. | imbedded.                                                                 |
| Danville, Ill.        | As <i>Macrocheilus ventricosus</i> . A pyritized individual.              |

|       |                   |
|-------|-------------------|
| Ohio? | Fragmentary cast. |
|-------|-------------------|

CRUSTACEA.

Order XIPHOSURA

|                   |                                                                                                                                |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------|
| .....             | See <i>Euproöps Danæ</i> .                                                                                                     |
| .....             | As <i>Belinurus Danæ</i> . The page is " 43 " in the author's reprints.                                                        |
| .....             | " " " " " "                                                                                                                    |
| Mazon Creek, Ill. | Genus proposed. A cast in a clay-iron-stone nodule. One of the types used in the original description, but it was not figured. |

|     |                                                                                                                                                                                                                                                                                           |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| " " | As <i>Eurypterus (Anthraconectes) mazonensis</i> . External imprint of upper surface. The specimen has been weathered somewhat since the nodule was split. It is a little larger than M. & W.'s specimen, and does not seem to be its counterpart, as stated on p. 26 of the paper cited. |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Cretaceous. Kingdom PLANTÆ. Subkingdom

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                     | REFERENCE.                 |         |            |          |        |
|---------------|------------------|-------------------|----------------------------------------------------------------|----------------------------|---------|------------|----------|--------|
|               |                  |                   |                                                                | Work.                      | Vol.    | P.         | Pl       | Figs.  |
| Dak.          | <u>5267</u><br>1 | Type.             | <b>Discorea</b> Linn.<br>? cretacea..... <i>Lesq.</i>          | G. S. Terr.                | 6       | 56         | 28       | 10     |
| "             | <u>5268</u><br>1 | "                 | <b>Ficus</b> Linn.<br>? Halliana..... <i>Lesq.</i>             | " "                        | 6       | 68         | 28       | 3      |
| "             | "                | "                 | ? " . . . . . "                                                | " "                        | 6       | 68         | 28       | 9      |
| "             | <u>5269</u><br>1 | "                 | <b>Phyllites</b> Brongniart.<br>betuliformis..... <i>Lesq.</i> | T. A. P. S.<br>G. S. Terr. | 13<br>6 | 430<br>112 | 23<br>28 | 4<br>4 |
| "             | <u>5270</u><br>1 | .....             | vanonæ ( <i>Heer</i> )..... <i>Lesq.</i>                       | " "                        | 6       | 113        | 20       | 7      |
| "             | "                | Fig'd.            | " " . . . . . "                                                | " "                        | 6       | 113        | 28       | 8      |

Kingdom ANIMALIA. Subkingdom

|       |                  |        |                                                                             |             |   |     |        |       |
|-------|------------------|--------|-----------------------------------------------------------------------------|-------------|---|-----|--------|-------|
| Cret. | <u>5271</u><br>1 | Fig'd. | <b>Barrettia</b> Woodward.<br>monilifera ( <i>Woodw.</i> )<br><i>Whitf.</i> | A. M. N. H. | 9 | 233 | 27-32  | ..... |
| "     | "                | "      | " " " "                                                                     | " "         | 9 | 233 | 38     | I-4   |
| "     | <u>5272</u><br>1 | Type.  | multilirata..... <i>Whitf.</i>                                              | " "         | 9 | 244 | 33-35  | ..... |
| "     | <u>5273</u><br>1 | "      | sparcilirata..... <i>Whitf.</i>                                             | " "         | 9 | 245 | 36, 37 | ..... |

MOLLUSCOIDEA.

|        |                  |        |                                                                              |                          |         |          |        |                  |
|--------|------------------|--------|------------------------------------------------------------------------------|--------------------------|---------|----------|--------|------------------|
| Ft. P. | <u>5274</u><br>1 | Type.  | <b>Lingula</b> Bruguière.<br>subspatulata.... <i>H. &amp; M.</i>             | Mem. A. A.               | 5, N.S. | 38c      | I      | 2a, b            |
| L. M.  | <u>5275</u><br>1 | Fig'd. | <b>Terebratella</b> d'Orbigny.<br>plicata ( <i>Say</i> )..... <i>Whitf.</i>  | Mon. G. S.<br>Pal. N. J. | 9<br>I  | 12<br>12 | I<br>I | 5, 6<br>5, 6     |
| "      | "                | "      | " " . . . . . "                                                              | Mon. G. S.<br>Pal. N. J. | 9<br>I  | 12<br>12 | I<br>I | 7, 8<br>7, 8     |
| M. M.  | <u>5276</u><br>1 | "      | <b>Terebratula</b> Llwhyd.<br>Harlani ( <i>Morton</i> ). <i>Whitf.</i>       | Mon. G. S.<br>Pal. N. J. | 9<br>I  | 8<br>8   | I<br>I | 20-22<br>20-22   |
| "      | <u>5277</u><br>1 | "      | " <i>var. fragilis</i><br>( <i>Morton</i> ) <i>Whitf.</i>                    | Mon. G. S.<br>Pal. N. J. | 9<br>I  | 7<br>7   | I<br>I | 17, 18<br>17, 18 |
| "      | <u>5278</u><br>1 | "      | " <i>var. perovalis</i><br>( <i>Morton</i> ) <i>Whitf.</i>                   | Mon. G. S.<br>Pal. N. J. | 9<br>I  | 8<br>8   | I<br>I | 19<br>19         |
| U. M.  | <u>5279</u><br>1 | "      | <b>Terebratulina</b> d'Orbigny.<br>atlantica ( <i>Morton</i> ) <i>Whitf.</i> | Mon. G. S.<br>Pal. N. J. | 9<br>I  | 9<br>9   | I<br>I | 10, 13<br>10, 13 |

Subkingdom MOLLUSCA.

|       |                  |        |                                                                     |                          |        |          |        |                  |
|-------|------------------|--------|---------------------------------------------------------------------|--------------------------|--------|----------|--------|------------------|
| Ripl. | <u>5280</u><br>1 | Fig'd. | <b>Amussium</b> Klein.<br>simplicum ( <i>Con.</i> ).. <i>Whitf.</i> | Mon. G. S.<br>Pal. N. J. | 9<br>I | 51<br>51 | 7<br>7 | 11, 12<br>11, 12 |
| Cret. | <u>5281</u><br>1 | Type.  | <b>Anatina</b> Lamarck.<br>? orientalis..... <i>Whitf.</i>          | A. M. N. H.              | 3      | 412      | 7      | 18               |



## PHANEROGAMIA. Class ANGIOSPERMEÆ.

| LOCALITY.           | REMARKS.                                                                                                                                            |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Near New Ulm, Minn. | Imprint not entire along middle line. From the bank of the Big Cottonwood river.                                                                    |
| “ “                 | A nearly entire imprint and its counterpart. The latter shows more of the apex than the portion figured. From the bank of the Big Cottonwood river. |
| “ “                 | Part of the imprint of a leaf. From the bank of the Big Cottonwood river.                                                                           |
| “ “                 | Part of an imprint of a leaf. Lesquereux seems to have made a mistake in giving the locality of this specimen as “ Nebraska.”                       |
| “ “                 | Possibly the counterpart of the specimen figured. From the bank of the Big Cottonwood river.                                                        |
| “ “                 | The specimen figured and its counterpart.                                                                                                           |

## CŒLEENTERATA. Class ACTINOZOA.

|                |                                                                                |
|----------------|--------------------------------------------------------------------------------|
| Jamaica, W. I. | The six specimens described and illustrated. From Orange Cove, Hanover Parish. |
| “ “            | Four thin sections. From Orange Cove, Hanover Parish.                          |
| “ “            | Two specimens. From Orange Cove, Hanover Parish.                               |
| “ “            | Two specimens. From Logie Green, Clarendon Parish.                             |

## Class BRACHIOPODA.

|                                        |                                                                                                                               |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Near Red Cedar Is.,<br>Missouri River. | Cast which has lost the shell, which was originally preserved, according to the description. From 35 miles below Fort Pierre. |
| Near New Egypt, N. J.                  | A large individual.                                                                                                           |
| Middletown, N. J.                      | “ “ “                                                                                                                         |
| Near New Egypt, N. J.                  | A full-grown individual.                                                                                                      |
| “ “                                    | An individual and the partial cast of another.                                                                                |
| “ “                                    | A partly exfoliated individual.                                                                                               |
| Near Farmingdale, N. J.                | Two casts.                                                                                                                    |

## Class LAMELLIBRANCHIATA.

|                  |                                                                                          |
|------------------|------------------------------------------------------------------------------------------|
| Eufaula, Ala.    | Two opposite valves, imbedded.                                                           |
| Shweifaf, Syria. | Imbedded individual showing much exfoliated right side. From the Andrifil Chalk horizon. |

## Class LAMELLIBRANCHIATA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                              | REFERENCE.         |              |           |          |              |
|------------------|------------------|----------------------|-----------------------------------------------------------------------------------------|--------------------|--------------|-----------|----------|--------------|
|                  |                  |                      |                                                                                         | Work.              | Vol.         | P.        | Pl.      | Figs.        |
|                  |                  |                      | <b>Arca</b> Lamarck.<br><i>transversa</i> .....                                         | .....              | .....        | ....      | .....    | .....        |
| Cret.            | $\frac{5282}{1}$ | Type.                | <b>Arcopagia</b> d'Orbigny.<br><i>planissima</i> ..... <i>Whitf.</i>                    | A. M. N. H.        | 3            | 409       | 7        | 8, 9         |
| Ft. P.           | $\frac{5283}{1}$ | "                    | <b>Avicula</b> Bruguière.<br><i>Haydeni</i> ..... <i>H. &amp; M.</i>                    | Mem. A. A.         | 5, N.S.      | 382       | I        | 5a, b        |
| Dak.             | $\frac{5284}{1}$ | "                    | <b>Axinæa</b> Poli.<br><i>siouxensis</i> ..... <i>H. &amp; M.</i><br><i>Meek.</i>       | " "<br>G. S. Terr. | 5, N.S.<br>9 | 384<br>92 | I<br>I   | 12<br>6      |
| Ripl.            | $\frac{5285}{1}$ | "                    | <b>Callista</b> Poli.<br><i>eufaulensis</i> ..... <i>Conrad.</i>                        | J. A. N. S.        | 4, 2d Ser.   | 282       | 46       | 24           |
| Cret.            | $\frac{5286}{1}$ | "                    | <i>syriaca</i> ..... <i>Whitf.</i>                                                      | A. M. N. H.        | 3            | 411       | 7        | 14, 15       |
| Ft. P.           | $\frac{5287}{1}$ | "                    | ( <b>Aphrodina</b> ?)<br><i>tenuis</i> ..... <i>H. &amp; M.</i>                         | Mem. A. A.         | 5, N.S.      | 383       | I        | 8a-c         |
| Ft. B.           | $\frac{5288}{1}$ | "                    | ( <b>Dosiniopsis</b> ?)<br><i>orbiculata</i> ..... <i>H. &amp; M.</i>                   | " "                | 5, N.S.      | 382       | I        | 7            |
| Cret.            | $\frac{5289}{1}$ | "                    | <b>Caprina</b> d'Orbigny.<br><i>jamaicensis</i> ..... <i>Whitf.</i>                     | A. M. N. H.        | 9            | 192       | 13<br>15 | 1, 2<br>1, 2 |
| Ft. P.           | $\frac{5290}{1}$ | "                    | <b>Caprinella</b> d'Orbigny.<br><i>coraloidea</i> ..... <i>H. &amp; M.</i>              | Mem. A. A.         | 5, N.S.      | 380       | I        | 3a-f         |
| Cret.            | $\frac{5291}{1}$ | "                    | <i>occidentalis</i> ..... <i>Whitf.</i>                                                 | A. M. N. H.        | 9            | 193       | 16<br>17 | 1-4<br>1-4   |
| "                | $\frac{5292}{1}$ | "                    | <i>quadrangularis</i> ... <i>Whitf.</i>                                                 | " "                | 9            | 193       | 12<br>14 | 5<br>4, 5    |
| "                | $\frac{5293}{1}$ | "                    | <b>Caprinula</b> d'Orbigny.<br><i>gigantea</i> ..... <i>Whitf.</i>                      | " "                | 9            | 194       | 18-22    | .....        |
| "                | $\frac{5294}{1}$ | "                    | <b>Cardita</b> Bruguière.<br><i>Rawsoni</i> ..... <i>Whitf.</i>                         | " "                | 3            | 397       | 5        | 9, 10        |
| "                | $\frac{5295}{1}$ | "                    | <b>Cardium</b> Linn.<br>( <b>Protocardium</b> ?)<br><i>Birdanum</i> ..... <i>Whitf.</i> | " "                | 3            | 405       | 6        | 7-10         |
| "                | $\frac{5296}{1}$ | "                    | ( <b>Serripes</b> ?)<br><i>bewertense</i> ..... <i>Whitf.</i>                           | " "                | 3            | 404       | 6        | 11-13        |
| "                | $\frac{5296}{2}$ | "                    | " " " " " "                                                                             | " "                | 3            | 404       | 6        | 14           |
| "                | $\frac{5297}{1}$ | "                    | <b>Caryatis</b> Römer.<br><i>globulus</i> ..... <i>Whitf.</i>                           | " "                | 3            | 410       | 7        | 10, 11       |
| U. M.            | $\frac{5298}{1}$ | Fig'd.               | <i>veta</i> ( <i>Conrad</i> ).... <i>Whitf.</i>                                         | Mon. G. S.         | 9            | 218       | 28       | 16           |
| "                | $\frac{5298}{2}$ | "                    | " " " " " "                                                                             | Pal. N. J.         | I            | 218       | 28       | 16           |
| "                |                  | "                    | " " " " " "                                                                             | Mon. G. S.         | 9            | 218       | 28       | 18, 19       |
| "                |                  | "                    | " " " " " "                                                                             | Pal. N. J.         | I            | 218       | 28       | 18, 19       |



| LOCALITY.                              | REMARKS.                                                                                                                                                         |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                                  | See <i>Trigonarca transversa</i> .                                                                                                                               |
| Shimlan, Syria.                        | Internal cast of an individual. From the brown clay above the Abeih sandstone.                                                                                   |
| Near Red Cedar Is.,<br>Missouri River. | A left valve imbedded. From 25 miles below Fort Pierre.                                                                                                          |
| .....                                  | As <i>Pectunculus siouxensis</i> .                                                                                                                               |
| .....                                  | " <i>Trigonarca (Breviarca?) siouxensis</i> . Internal cast of a left valve.                                                                                     |
| Eufaula, Ala.                          | A right valve, imbedded. The umbo has been broken since the figure was made.                                                                                     |
| Naaman, Syria.                         | Entire internal cast. From the Naaman beds.                                                                                                                      |
| Missouri River.                        | As <i>Cytherea tenuis</i> . The specimen has been ruined by the oxidation of the pyrite in the shale. From five miles below James river, S. D.                   |
| " "                                    | As <i>Cytherea orbiculata</i> . A partly exfoliated and altered right valve, imbedded. From five miles below the mouth of the James river, S. D.                 |
| Jamaica, W. I.                         | A small individual and a very large one. From Logie Green, Clarendon Parish.                                                                                     |
| Sage Creek, Wyo.                       | The specimen as described and figured.                                                                                                                           |
| Jamaica, W. I.                         | Five upper and three lower valves. From Logie Green, Clarendon Parish.                                                                                           |
| " "                                    | A fragmentary and an entire lower valve. From Christianna, Manchester Parish.                                                                                    |
| " "                                    | Six valves and parts of valves. From Logie Green, Clarendon Parish.                                                                                              |
| Beirût District, Syria.                | Entire internal cast. Probably from the brown beds above the Abeih sandstone.                                                                                    |
| Duccûn, Syria.                         | Two individuals and a right valve. From the Abeih sandstone.                                                                                                     |
| Bewerty, Syria.<br>Duccûn, Syria.      | An entire individual and a larger left valve. From the Bewerty bed.<br>A right valve. The figure is an enlargement to 1½ diameters.<br>From the Abeih sandstone. |
| Klelay, Syria.                         | Entire left valve somewhat weathered. From the Abeih sandstone.                                                                                                  |
| Squankum, N. J.                        | An internal cast.                                                                                                                                                |
| Farmingdale, N. J.                     | An individual preserving much of the shell.                                                                                                                      |

## Class LAMELLIBRANCHIATA—Continued.

| Geol.<br>Subdiv | Cat.<br>No.      | Type or<br>Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                                     | REFERENCE.  |            |       |       |        |
|-----------------|------------------|-----------------------|--------------------------------------------------------------------------------|-------------|------------|-------|-------|--------|
|                 |                  |                       |                                                                                | Work.       | Vol.       | P.    | Pl.   | Figs.  |
| L. M.           | $\frac{5299}{1}$ | Fig'd.                | <b>Cibota</b> Browne.<br>uniopsis ( <i>Conrad</i> ) <i>Whitf.</i>              | Mon. G. S.  | 9          | 92    | II    | 32, 33 |
|                 |                  |                       | "                                                                              | Pal. N. J.  | I          | 92    | II    | 32, 33 |
| Cret.           | $\frac{5300}{1}$ | Type.                 | <b>Corbula</b> Lamarck.<br>olivæ..... <i>Whitf.</i>                            | A. M. N. H. | 3          | 413   | 7     | 19-21  |
| "               | $\frac{5301}{1}$ | "                     | <b>Corbicula</b> Megerle.<br>( <i>Batissa</i> ?)<br>Hamlini..... <i>Whitf.</i> | " "         | 3          | 407   | 6     | 17-20  |
| "               | $\frac{5301}{2}$ | "                     | " .....                                                                        | " "         | 3          | 407   | 6     | 21, 22 |
| "               | $\frac{5302}{1}$ | Gen. and<br>Sp. Type. | <b>Corbiculopsis</b> Whitfield.<br>Birdi..... <i>Whitf.</i>                    | " "         | 3          | 409   | 7     | 3-5    |
| "               | "                | "                     | " .....                                                                        | " "         | 3          | 409   | 7     | 6, 7   |
| U. M.           | $\frac{5303}{1}$ | Type.                 | <b>Crassatella</b> Lamarck.<br>Conradi..... <i>Whitf.</i>                      | Mon. G. S.  | 9          | 209   | 28    | 3      |
|                 |                  |                       | "                                                                              | Pal. N. J.  | I          | 209   | 28    | 3      |
|                 |                  |                       | <i>curta</i> <i>Whitf.</i> (non <i>Con.</i> )..                                | .....       | .....      | ..... | ..... | .....  |
| Ft. P.          | $\frac{5304}{1}$ | Type.                 | Evansi..... <i>H. &amp; M.</i>                                                 | Mem. A. A.  | 5, N.S.    | 383   | I     | 9a-e   |
| Ripl.           | $\frac{5305}{1}$ | "                     | lintea..... <i>Conrad.</i>                                                     | J. A. N. S. | 4, 2d Ser. | 279   | 46    | 5      |
| "               | $\frac{5306}{1}$ | "                     | pteropsis..... <i>Conrad.</i>                                                  | " "         | 4, 2d Ser. | 279   | 46    | 9      |
| U. M.           | $\frac{5307}{1}$ | "                     | <b>Criocardium</b> Conrad.<br>nucleolus..... <i>Whitf.</i>                     | Mon. G. S.  | 9          | 214   | 28    | 10, 11 |
|                 |                  |                       | "                                                                              | Pal. N. J.  | I          | 214   | 28    | 10, 11 |
| L. M.           | $\frac{5308}{1}$ | Fig'd.                | <b>Cyprimeria</b> Conrad.<br>depressa ( <i>Conrad</i> ) <i>Whitf.</i>          | Mon. G. S.  | 9          | 156   | 22    | 13     |
|                 |                  |                       | "                                                                              | Pal. N. J.  | I          | 156   | 22    | 13     |
|                 |                  |                       | <b>Cytherea</b> Lamarck.<br><i>orbiculata</i> .....                            | .....       | .....      | ..... | ..... | .....  |
|                 |                  |                       | <i>tenuis</i> .....                                                            | .....       | .....      | ..... | ..... | .....  |
| Cret.           | $\frac{5309}{1}$ | Type.                 | <b>Donax</b> Linn.<br>minutissima..... <i>Whitf.</i>                           | A. M. N. H. | 3          | 411   | 7     | 12, 13 |
| "               | $\frac{5310}{1}$ | "                     | <b>Eriphyla</b> Gabb.<br>crenulicosta..... <i>Whitf.</i>                       | " "         | 3          | 403   | 6     | 2-5    |
| M. M.           | $\frac{5311}{1}$ | Fig'd.                | <b>Gastrochæna</b> Spengler.<br>americana ( <i>Gabb</i> ) <i>Whitf.</i>        | Mon. G. S.  | 9          | 203   | 26    | 18     |
|                 |                  |                       | "                                                                              | Pal. N. J.  | I          | 203   | 26    | 18     |
| Cret.           | $\frac{5312}{1}$ | Type.                 | <b>Gervillia</b> Defrance.<br>obesa..... <i>Whitf.</i>                         | A. M. N. H. | 3          | 391   | 4A    | 5-7    |
| "               | $\frac{5313}{1}$ | "                     | perobesa.....                                                                  | " "         | 3          | 392   | 5     | 6-8    |
| "               | $\frac{5314}{1}$ | "                     | trapezoidalis.....                                                             | " "         | 3          | 392   | 4A    | 11, 12 |
| M. M.           | $\frac{5315}{1}$ | "                     | <b>Gryphæa</b> Lamarck.<br>Bryani <i>Gabb</i> ,                                |             |            |       |       |        |
|                 |                  |                       | var. præcedens <i>Whitf.</i>                                                   | Mon. G. S.  | 9          | 194   | 26    | 7, 8   |
|                 |                  |                       | "                                                                              | Pal. N. J.  | I          | 195   | 26    | 7, 8   |
| "               | $\frac{5316}{1}$ | Fig'd.                | vesicularis ( <i>Lam.</i> ) <i>Whitf.</i>                                      | Mon. G. S.  | 9          | 194   | 26    | 9, 10  |
|                 |                  |                       | "                                                                              | Pal. N. J.  | I          | 194   | 26    | 9, 10  |



| LOCALITY.             | REMARKS.                                                                                                                                           |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Near New Egypt, N. J. | Internal cast of an individual.                                                                                                                    |
| Near Abeih, Syria.    | Entire individual, very perfect. From the Abeih sandstone at the "Olive locality."                                                                 |
| Duccûn, Syria.        | An entire individual and a right valve. From the Abeih sandstone.                                                                                  |
| Marahh, Syria.        | Internal cast. From the Bewerty bed.                                                                                                               |
| Duccûn, Syria.        | An individual and a larger specimen with the left valve slightly imperfect. From the Abeih sandstone.                                              |
| " "                   | Upper part of a right valve and a somewhat imperfect individual with valves displaced so as to show hinge of left valve. From the Abeih sandstone. |
| .....                 | As <i>Crassatella curta</i> , Con. ? by typogr. error in expl. of plate.                                                                           |
| Near New Egypt, N. J. | " " " Con. ? by typogr. error in expl. of pl. Internal cast preserving a fragment of shell.                                                        |
| .....                 | See <i>Crassatella Conradi</i> .                                                                                                                   |
| Sage Creek, Wyo.      | Two opposite valves and an internal cast.                                                                                                          |
| Eufaula, Ala.         | A right valve and its internal cast.                                                                                                               |
| Tippah Co., Miss.     | An entire right valve.                                                                                                                             |
| Farmingdale, N. J.    | Two internal casts.                                                                                                                                |
| Freehold, N. J.       | Internal cast of a left valve.                                                                                                                     |
| .....                 | See <i>Callista</i> ( <i>Dosiniopsis</i> ?) <i>orbiculata</i> .                                                                                    |
| .....                 | " " ( <i>Aphrodina</i> ?) <i>tenuis</i> .                                                                                                          |
| Near Abeih, Syria.    | Somewhat worn individual, with slight break on lower edge. From the Abeih sandstone at the "Olive locality."                                       |
| Bewerty, Syria.       | An entire individual and a left valve. The orig. of fig. 4 is missing. From the Bewerty beds.                                                      |
| Timber Creek, N. J.   | Cast of a tube.                                                                                                                                    |
| Andrifl, Syria.       | Practically entire. From the Abeih sandstone.                                                                                                      |
| Near Abeih, Syria.    | A nearly entire individual from the Abeih sandstone.                                                                                               |
| Bewerty, Syria.       | Two weathered right valves. From the Bewerty beds.                                                                                                 |
| Monmouth Co., N. J.   | The separated valves of an individual.                                                                                                             |
| Near New Egypt, N. J. | Entire. Shell has been mostly replaced by limonite.                                                                                                |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                    | REFERENCE.  |         |     |     |        |
|---------------|------------------|-------------------|-----------------------------------------------|-------------|---------|-----|-----|--------|
|               |                  |                   |                                               | Work.       | Vol.    | P.  | Pl. | Figs.  |
| M. M.         | $\frac{5317}{1}$ | Fig'd.            | <b>Gryphæostrea</b> Conrad.                   |             |         |     |     |        |
|               |                  |                   | vomer ( <i>Morton</i> )... <i>Whitf.</i>      | Mon. G. S.  | 9       | 195 | 26  | 11, 12 |
|               |                  |                   | "                                             | Pal. N. J.  | 1       | 195 | 26  | 11, 12 |
| L. M.         | $\frac{5318}{1}$ | "                 | <b>Inoceramus</b> J. Sowerby.                 |             |         |     |     |        |
|               |                  |                   | Barabini ( <i>Morton</i> ) <i>Whitf.</i>      | Mon. G. S.  | 9       | 75  | 15  | 4, 5   |
|               |                  |                   | "                                             | Pal. N. J.  | 1       | 75  | 15  | 4, 5   |
| Ft. B.        | $\frac{5319}{1}$ | Type.             | Conradi . . . . . <i>H. &amp; M.</i>          | Mem. A. A.  | 5, N.S. | 387 | 2   | 5a, b  |
| Ft. P.        | $\frac{5320}{1}$ | "                 | convexus . . . . . <i>H. &amp; M.</i>         | " "         | 5, N.S. | 386 | 2   | 2a, b  |
| Ft. B.        | $\frac{5321}{1}$ | "                 | fragilis . . . . . <i>H. &amp; M.</i>         | " "         | 5, N.S. | 388 | 2   | 6a, b  |
|               |                  |                   | <i>nebrascensis</i> . . . . .                 |             |         |     |     |        |
| Ft. P.        | $\frac{5322}{1}$ | Type.             | sagensis Owen,<br>var. nebrascensis Owen.     | W., I. & M. |         | 582 | 8A  | 1      |
| "             | $\frac{5323}{1}$ | "                 | sublævis . . . . . <i>H. &amp; M.</i>         | Mem. A. A.  | 5, N.S. | 386 | 2   | 1a, b  |
| "             | $\frac{5324}{1}$ | "                 | tenuilineatus . . . <i>H. &amp; M.</i>        | " "         | 5, N.S. | 387 | 2   | 3a, b  |
| Cret.         | $\frac{5325}{1}$ | "                 | <b>Lima</b> Bruguière                         |             |         |     |     |        |
|               |                  |                   | tenuitesta . . . . . <i>Whitf.</i>            | A. M. N. H. | 3       | 390 | 4A  | 1, 2   |
| "             | $\frac{5326}{1}$ | "                 | <b>Lucina</b> Bruguière.                      |             |         |     |     |        |
|               |                  |                   | percancellata . . . . <i>Whitf.</i>           | " "         | 3       | 403 | 6   | 6      |
| "             | $\frac{5327}{1}$ | "                 | <b>Mactra</b> Linn.                           |             |         |     |     |        |
|               |                  |                   | ? olivensis . . . . . <i>Whitf.</i>           | " "         | 3       | 412 | 7   | 16, 17 |
|               |                  |                   | <b>Modiola</b> Lamarck.                       |             |         |     |     |        |
| U. M.         | $\frac{5328}{1}$ | "                 | Johnsoni . . . . . <i>Whitf.</i>              | Mon. G. S.  | 9       | 207 | 28  | 8, 9   |
|               |                  |                   | "                                             | Pal. N. J.  | 1       | 207 | 28  | 8, 9   |
| Cret.         | $\frac{5329}{1}$ | "                 | <b>Nucula</b> Lamarck.                        |             |         |     |     |        |
|               |                  |                   | glanstriticea . . . . <i>Whitf.</i>           | A. M. N. H. | 3       | 396 | 5   | 3-5    |
|               |                  |                   | <i>subnasuta</i> . . . . . <i>H. &amp; M.</i> |             |         |     |     |        |
|               |                  |                   | <i>ventricosa</i> H. & M. (non                | Hinds)      |         |     |     |        |
| Ft. P.        | $\frac{5330}{1}$ | Type.             | <b>Nuculana</b> Link.                         |             |         |     |     |        |
|               |                  |                   | subnasuta . . . . . <i>H. &amp; M.</i>        | Mem. A. A.  | 5, N.S. | 384 | 1   | 10a-c  |
| Cret.         | $\frac{5331}{1}$ | "                 | <b>Opis</b> Defrance.                         |             |         |     |     |        |
|               |                  |                   | megambona . . . . . <i>Whitf.</i>             | A. M. N. H. | 3       | 398 | 5   | 11, 12 |
| L. M.         | $\frac{5332}{1}$ | Fig'd.            | <b>Panopea</b> Ménard dela Groye.             |             |         |     |     |        |
|               |                  |                   | decisa ( <i>Conrad</i> ) . . <i>Whitf.</i>    | Mon. G. S.  | 9       | 181 | 24  | 6      |
|               |                  |                   | "                                             | Pal. N. J.  | 1       | 181 | 24  | 6      |
| L. M.         | $\frac{5333}{1}$ | Fig'd.            | <b>Pecten</b> Müller.                         |             |         |     |     |        |
|               |                  |                   | <i>rigida</i> . . . . .                       |             |         |     |     |        |
|               |                  |                   | venustus ( <i>Morton</i> ) <i>Whitf.</i>      | Mon. G. S.  | 9       | 45  | 7   | 1      |
|               |                  |                   | "                                             | Pal. N. J.  | 1       | 45  | 7   | 1      |
|               |                  |                   | "                                             | Mon. G. S.  | 9       | 45  | 7   | 2-4    |
| "             | $\frac{5333}{2}$ | "                 | "                                             | Pal. N. J.  | 1       | 45  | 7   | 2-4    |
|               |                  |                   | <b>Pectunculus</b> Lamarck.                   |             |         |     |     |        |
|               |                  |                   | <i>siouxensis</i> . . . . .                   |             |         |     |     |        |



| LOCALITY.                             | REMARKS.                                                                                                                                                                                              |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| New Egypt, N. J.                      | An individual.                                                                                                                                                                                        |
| Marlborough, N. J.<br>Missouri River. | Cast of a left valve.<br>External imprint of a crushed individual retaining some fragments of shell. From five miles below the mouth of the Vermilion river.                                          |
| Sage Creek, Wyo.<br>Missouri River.   | Nearly entire left valve, imbedded.<br>Cast of a left valve. From five miles below the mouth of the Vermilion river.                                                                                  |
| .....                                 | See <i>Inoceramus sagensis</i> , var. <i>nebrascensis</i> .                                                                                                                                           |
| Sage Creek, Wyo.                      | As <i>Inoceramus nebrascensis</i> . A left valve, partly exfoliated, always considered to have been the original of the species. Reversed in engraving. Its right valve is present in the same block. |
| Missouri River.                       | A somewhat exfoliated right valve, imbedded. From the "Great Bend" of the Missouri river.                                                                                                             |
| Sage Creek, Wyo.                      | An imperfect, somewhat exfoliated left valve, imbedded.                                                                                                                                               |
| Gazelle Mt., Syria.                   | A right valve which has lost the anterior margin. From the Gazelle cherts.                                                                                                                            |
| Near Abeih, Syria.                    | Entire. From the Abeih sandstone at the "Olive locality."                                                                                                                                             |
| " "                                   | Entire. From the Abeih sandstone at the "Olive locality."                                                                                                                                             |
| Farmingdale, N. J.                    | Cast showing external features.                                                                                                                                                                       |
| Near Abeih, Syria.                    | Two individuals and a left valve. From the Abeih sandstone at the "Olive locality."                                                                                                                   |
| .....                                 | See <i>Nuculana subnasuta</i> .                                                                                                                                                                       |
| .....                                 | " <i>Yoldia ventricosa</i> .                                                                                                                                                                          |
| South Dakota.                         | As <i>Nucula subnasuta</i> . An entire individual. From the mouth of the Big Sioux river.                                                                                                             |
| Bewerty, Syria.                       | Entire. From the Bewerty beds.                                                                                                                                                                        |
| Near Burlington, N. J.                | Cast of conjoined valves.                                                                                                                                                                             |
| .....                                 | See <i>Syncyclonema rigidum</i> .                                                                                                                                                                     |
| Mullica Hill, N. J.                   | Cast of a right valve.                                                                                                                                                                                |
| Freehold, N. J.                       | Two opposite valves, now somewhat broken.                                                                                                                                                             |
| .....                                 | See <i>Axinæa siouxensis</i> .                                                                                                                                                                        |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.   | GENUS, SPECIES AND AUTHOR.                                                     | REFERENCE.                 |            |          |                |                 |
|---------------|------------------|---------------------|--------------------------------------------------------------------------------|----------------------------|------------|----------|----------------|-----------------|
|               |                  |                     |                                                                                | Work.                      | Vol.       | P.       | Pl.            | Figs.           |
| Cret.         | <u>5334</u><br>1 | Type.               | <b>Perna</b> Bruguière.<br>palestina . . . . . <i>Whitf.</i>                   | A. M. N. H.                | 3          | 394      | 4A             | 8-10            |
| L. M.         | <u>5335</u><br>1 | Fig'd.              | <b>Pholadomya</b> G. B. Sowerby.<br>occidentalis ( <i>Mor.</i> ) <i>Whitf.</i> | Mon. G. S.                 | 9          | 175      | 24             | 1, 2            |
|               |                  |                     | "                                                                              | Pal. N. J.                 | 1          | 175      | 24             | 1, 2            |
| Cret.         | <u>5336</u><br>1 | Fig'd Sp. and G. T. | <b>Platopsis</b> Whitfield.<br>obruta ( <i>Con.</i> ) . . . . . <i>Whitf.</i>  | A. M. N. H.                | 3          | 400      | ....           | 2, 3            |
| "             | <u>5337</u><br>1 | Type.               | plicata . . . . . <i>Whitf.</i>                                                | " "                        | 3          | 400      | 5              | 13-15           |
| "             | <u>5338</u><br>1 | "                   | ? triangularis . . . . . <i>Whitf.</i>                                         | " "                        | 3          | 401      | 5              | 16, 17          |
| "             | <u>5339</u><br>1 | Fig'd Sp. and G. T. | undata ( <i>Con.</i> ) . . . . . <i>Whitf.</i>                                 | " "                        | 3          | 400      | ....           | 1               |
| Ripl.         | <u>5340</u><br>1 | Type.               | <b>Plicatula</b> Lamarck.<br>tetrica . . . . . <i>Conrad.</i>                  | J. A. N. S.                | II, 4      | 283      | 46             | 26              |
|               |                  |                     | <i>Pterinoperna</i> . . . . .<br><i>syriaca</i> . . . . .                      | .....                      | .....      | .....    | .....          | .....           |
| Cret.         | <u>5341</u><br>1 | Type.               | <b>Pteroperna</b> Morris and Ly cett.<br>syriaca . . . . . <i>Whitf.</i>       | A. M. N. H.                | 3          | 393      | 4A             | 13, 14          |
| "             | <u>5342</u><br>1 | "                   | <b>Radiolites</b> Lamarck.<br>adhærens . . . . . <i>Whitf.</i>                 | " "                        | 9          | 188      | 10<br>11<br>12 | 1-3<br>1-3<br>1 |
| "             | <u>5343</u><br>1 | "                   | annulosus . . . . . <i>Whitf.</i>                                              | " "                        | 9          | 191      | 14             | 3               |
| "             | <u>5344</u><br>1 | "                   | cancellatus . . . . . <i>Whitf.</i>                                            | " "                        | 9          | 190      | 12<br>13       | 4<br>3-7        |
| "             | <u>5345</u><br>1 | "                   | macroplicatus . . . . . <i>Whitf.</i>                                          | " "                        | 9          | 190      | 12<br>13       | 2, 3<br>8       |
| "             | "                | "                   | " . . . . . "                                                                  | " "                        | 9          | 190      | 14             | 1, 2            |
| "             | <u>5346</u><br>1 | "                   | rudis . . . . . <i>Whitf.</i>                                                  | " "                        | 9          | 189      | 11             | 4               |
| "             | <u>5347</u><br>1 | "                   | ( <b>Lapeirousia</b> )<br>Nicholasi . . . . . <i>Whitf.</i>                    | " "                        | 9          | 186      | 6, 7           | .....           |
| "             | <u>5347</u><br>2 | "                   | " . . . . . "                                                                  | " "                        | 9          | 186      | 8, 9           | .....           |
| "             | <u>5348</u><br>1 | "                   | <b>Radula</b> Klein.<br>naamanensis . . . . . <i>Whitf.</i>                    | " "                        | 3          | 390      | 4A             | 3, 4            |
| "             | <u>5349</u><br>1 | "                   | <b>Scambula</b> Conrad.<br>secunda . . . . . <i>Whitf.</i>                     | " "                        | 3          | 402      | 6              | 1               |
| Ripl.         | <u>5350</u><br>1 | Sub-G. & Sp Type.   | <b>Stalagmium</b> Conrad . . . . .<br>serica . . . . . <i>Conrad.</i>          | J. A. N. S.                | II, 4      | 281      | 46             | 23              |
| Ft. P.        | <u>5351</u><br>1 | Gen. and Sp. Type.  | <b>Syncyclonema</b> Meek.<br>rigidum . . . . . <i>H. &amp; M.</i>              | Mem. A. A.                 | 5, N.S.    | 381      | 1              | 4a-c            |
|               |                  |                     | "                                                                              | C. L. I. F.<br>G. S. Terr. | Cret.<br>9 | 31<br>26 | .....          | .....           |
| Cret.         | <u>5352</u><br>1 | Type.               | <b>Trapezium</b> Humphrey.<br>naamanense . . . . . <i>Whitf.</i>               | A. M. N. H.                | 3          | 406      | 6              | 15, 16          |



| LOCALITY.          | REMARKS.                                                                                                                  |
|--------------------|---------------------------------------------------------------------------------------------------------------------------|
| Klelay, Syria.     | The separated valves of an individual, somewhat imperfect as to margin. From the Abeih sandstone.                         |
| Monmouth, N. J.    | Cast of a large individual, showing external and internal features.                                                       |
| Bewerty, Syria.    | Two opposite valves. The left has lost its margin. From the Bewerty beds.                                                 |
| Duccûn, Syria.     | An entire individual and a right valve. From the Abeih sandstone at Duccûn.                                               |
| Near Abeih, Syria. | An entire individual from the Abeih sandstone at the "Olive locality."                                                    |
| Marahh, Syria.     | A left valve. From the Bewerty beds.                                                                                      |
| Tippah Co., Miss.  | Entire individual.                                                                                                        |
| .....              | Misprint for <i>Pteroperna</i> , q. v.                                                                                    |
| .....              | See <i>Pteroperna syriaca</i> .                                                                                           |
| Bewerty, Syria.    | As <i>Pterinoperna syriaca</i> . An imperfect left valve. From the Bewerty beds.                                          |
| Jamaica, W. I.     | Four specimens. From Logie Green, Clarendon Parish.                                                                       |
| " "                | A weathered individual. From near Christianna, Manchester Parish.                                                         |
| " "                | Two individuals. From Logie Green, Clarendon Parish.                                                                      |
| " "                | Four individuals, two of which are young and attached to a specimen of <i>Caprinella occidentalis</i> . From Logie Green. |
| " "                | Part of a small individual showing artificial section. From Logie Green.                                                  |
| " "                | A single specimen. From Logie Green.                                                                                      |
| " "                | Three specimens. From Logie Green.                                                                                        |
| " "                | An upper valve with part of the lower valve belonging thereto. Weathered. From Houghton Hall, Hanover Parish.             |
| Naaman, Syria.     | Cast of a right valve and a right valve.                                                                                  |
| Near Abeih, Syria. | Individual with slight break in anterior margin. From the Abeih sandstone at the "Olive locality."                        |
| .....              | Defined as a subgenus under <i>Crenella</i> .                                                                             |
| Eufaula, Ala.      | A right valve. Figure is an enlargement to two diameters.                                                                 |
| .....              | As <i>Pecten rigida</i> H. & M.                                                                                           |
| .....              | New genus established.                                                                                                    |
| Sage Creek, Wyo.   | Genus fully described. Two more or less exfoliated opp. valves.                                                           |
| Naaman, Syria.     | Entire internal cast. From the Naaman beds.                                                                               |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                              | REFERENCE.  |         |       |       |        |
|---------------|------------------|-------------------|-------------------------------------------------------------------------|-------------|---------|-------|-------|--------|
|               |                  |                   |                                                                         | Work.       | Vol.    | P.    | Pl.   | Figs.  |
| Cret.         | $\frac{5353}{1}$ | Type.             | <b>Trigonarca</b> Conrad.<br>palestina..... <i>Whitf.</i>               | A. M. N. H. | 3       | 395   | 5     | 1, 2   |
| L. M.         | $\frac{5354}{1}$ | Fig'd.            | <i>siouxensis</i> .....                                                 | .....       | .....   | ..... | ..... | .....  |
|               |                  |                   | transversa ( <i>Gabb</i> ) <i>Whitf.</i>                                | Mon. G. S.  | 9       | 89    | 12    | 13     |
|               |                  |                   | "                                                                       | Pal. N. J.  | 1       | 89    | 12    | 13     |
| Cret.         | $\frac{5355}{1}$ | Type.             | <b>Veleda</b> Conrad.<br>elliptica..... <i>Whitf.</i>                   | A. M. N. H. | 3       | 406   | 7     | 1, 2   |
| Ripl.         | $\frac{5356}{1}$ | Fig'd.            | <b>Veniella</b> Stoliczke.<br>conradi ( <i>Morton</i> ).. <i>Whitf.</i> | Mon. G. S.  | 9       | 144   | 19    | 10     |
|               |                  |                   | "                                                                       | Pal. N. J.  | 1       | 144   | 19    | 10     |
| Ft. P.        | $\frac{5357}{1}$ | Type.             | <b>Yoldia</b> Möller.<br>ventricosa..... <i>H. &amp; M.</i>             | Mem. A. A.  | 5, N.S. | 385   | 1     | 11a, b |

Class GASTROPODA.

|        |                  |                    |                                                                     |             |         |       |       |        |
|--------|------------------|--------------------|---------------------------------------------------------------------|-------------|---------|-------|-------|--------|
| Ft. P. | $\frac{5358}{1}$ | Type.              | <b>Acmaea</b> Eschscholtz.<br>occidentalis.... <i>H. &amp; M.</i>   | Mem. A. A.  | 5, N.S. | 385   | 1     | 13a-d  |
| L. M.  | $\frac{5359}{1}$ | Type.              | <b>Actæon</b> Montfort.<br><i>concinus</i> .....                    | .....       | .....   | ..... | ..... | .....  |
|        |                  |                    | Forbesianus..... <i>Whitf.</i>                                      | Mon. G. S.  | 18      | 157   | 19    | 21, 22 |
|        |                  |                    | "                                                                   | Pal. N. J.  | 2       | 157   | 19    | 21, 22 |
| Cret.  | $\frac{5360}{1}$ | "                  | <b>Actæonina</b> d'Orbigny.<br>marahhensis..... <i>Whitf.</i>       | A. M. N. H. | 3       | 436   | 10    | 18, 19 |
|        | $\frac{5361}{1}$ | "                  | syriaca..... <i>Whitf.</i>                                          | " "         | 3       | 435   | 11    | 10, 11 |
| Ripl.  | $\frac{5362}{1}$ | Sub-G. & Sp. Type. | <b>Afer</b> Conrad.....                                             | .....       | .....   | ..... | ..... | .....  |
|        |                  |                    | belliliratus..... <i>Conrad.</i>                                    | J. A. N. S. | 11, 3   | 332   | 35    | 17     |
| Cret.  | $\frac{5363}{1}$ | Type.              | <b>Akera</b> Müller.<br>siliciosa..... <i>Whitf.</i>                | A. M. N. H. | 3       | 441   | 10    | 14, 15 |
| Ft. P. | $\frac{5364}{1}$ | "                  | <b>Amauropsis</b> Mörch.<br>paludiniformis.. <i>H. &amp; M.</i>     | Mem. A. A.  | 5, N.S. | 389   | 3     | 3a-c   |
|        |                  |                    | " <i>Whitf.</i>                                                     | Mon. G. S.  | 18      | 132   | 16    | 26     |
|        |                  |                    | "                                                                   | Pal. N. J.  | 2       | 132   | 16    | 26     |
|        |                  |                    | <b>Buccinum</b> Linn.<br><i>vinculum</i> .....                      | .....       | .....   | ..... | ..... | .....  |
|        |                  |                    | <b>Capulus</b> Montfort.<br><i>occidentalis</i> .....               | .....       | .....   | ..... | ..... | .....  |
| Cret.  | $\frac{5365}{1}$ | Type.              | <b>Caricella</b> Conrad.<br>planilirata..... <i>Whitf.</i>          | A. M. N. H. | 3       | 414   | 8     | 1, 2   |
|        | $\frac{5366}{1}$ | "                  | <b>Cerithiopsis</b> Forbes & Hanley.<br>cretacea..... <i>Whitf.</i> | A. M. N. H. | 3       | 431   | 9     | 22     |
| "      | $\frac{5367}{1}$ | "                  | <b>Cerithium</b> Adanson.<br>Conradi..... <i>Whitf.</i>             | " "         | 3       | 428   | 9     | 11, 12 |
|        |                  |                    | <b>Cinulia</b> Gray.<br><i>concinna</i> .....                       | .....       | .....   | ..... | ..... | .....  |



| LOCALITY.                                 | REMARKS.                                                                                                                                                                                                                             |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Near Abeih, Syria.<br>.....               | Entire individual. An unfigured individual is included among the types. From the Abeih sandstone.<br>See <i>Axinea siouxensis</i> .                                                                                                  |
| Mullica Hill, N. J.                       | Cast of entire individual. On explanation of plate as <i>Arca</i> ( <i>Trigonarca</i> ) <i>transversa</i> .                                                                                                                          |
| Near Abeih, Syria.                        | Entire. From the Abeih sandstone at the "Olive locality."                                                                                                                                                                            |
| Eufaula, Ala.                             | A right valve, nearly perfect.                                                                                                                                                                                                       |
| Sage Creek, Wyo.                          | As <i>Nucula ventricosa</i> . A right valve, imbedded.                                                                                                                                                                               |
| Sage Creek, Wyo.<br>.....                 | As <i>Capulus occidentalis</i> . Internal cast.<br><br>See <i>Oligoptycha concinna</i> .                                                                                                                                             |
| Mullica Hill, N. J.                       | Internal cast.                                                                                                                                                                                                                       |
| Marahh, Syria.<br>Klelay, Syria.<br>..... | Internal cast. From the yellowish clays of the Bewerty horizon.<br>Two internal casts. From the Abeih sandstone.<br><br>Defined as a subgenus under <i>Fusus</i> .                                                                   |
| Tippah Co., Miss.                         | As <i>Fusus</i> ( <i>Afer</i> ) <i>belliliratus</i> . An individual, entire except as to part of aperture.                                                                                                                           |
| Ghurzûz, Syria.<br>.....                  | Two silicified individuals. From the Gazelle cherts.<br><br>As <i>Natica paludinæformis</i> .                                                                                                                                        |
| South Dakota.<br>.....<br>.....           | Two individuals, one of which is imbedded. From the "Great Bend" of the Missouri river. The locality seems to have been south of (below) Ft. Pierre.<br><br>See <i>Trachytriton vinculum</i> .<br><br>" <i>Acmaea occidentalis</i> . |
| Between Shimlan and Aithath, Syria.       | Imperfect internal cast. From the limestone above the Bewerty beds.                                                                                                                                                                  |
| Duccûn, Syria.                            | An individual with lip broken away. From the Abeih sandstone.                                                                                                                                                                        |
| " "                                       | Two somewhat imperfect individuals. From the Abeih sandstone.                                                                                                                                                                        |
| .....                                     | See <i>Oligoptycha concinna</i> .                                                                                                                                                                                                    |

Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                 | REFERENCE.             |           |         |       |               |
|---------------|------------------|--------------------|--------------------------------------------|------------------------|-----------|---------|-------|---------------|
|               |                  |                    |                                            | Work.                  | Vol.      | P.      | Pl.   | Figs.         |
| L. M.         | $\frac{5368}{1}$ | Type.              | <b>Cithara</b> Schumacher.                 |                        |           |         |       |               |
|               |                  |                    | mullicaënsis..... <i>Whitf.</i>            | Mon. G. S.             | 18        | 106     | 13    | 6             |
|               |                  |                    | "                                          | Pal. N. J.             | 2         | 106     | 13    | 6             |
| Ft. P.        | $\frac{5369}{1}$ | Gen. and Sp. Type. | <b>Closteriscus</b> Meek.                  |                        |           |         |       |               |
|               |                  |                    | tenuilineatus... <i>H. &amp; M. Meek.</i>  | Mem. A. A. G. S. Terr. | 5, N.S. 9 | 392 306 | 3     | 8a-c          |
| "             | $\frac{5370}{1}$ | Sub-G. & Sp. Type. | <b>Cryptorhytis</b> Meek.....              |                        |           |         |       |               |
|               |                  |                    | cheyennensis... <i>M. &amp; H.</i>         | P. A. N. S.            | 12        | 422     |       |               |
|               |                  |                    | <i>H. &amp; M. Meek.</i>                   | Mem. A. A. G. S. Terr. | 5, N.S. 9 | 393 365 | 3 19  | 10a, b 13a, b |
| Ripl.         | $\frac{5371}{1}$ | Type.              | <b>Daphnella</b> Hinds.                    |                        |           |         |       |               |
|               |                  |                    | ? eufaulensis..... <i>Conrad.</i>          | J. A. N. S.            | II, 4     | 285     |       |               |
| "             | $\frac{5372}{1}$ | "                  | ? subfilosa. .... <i>Conrad.</i>           | " "                    | II, 4     | 285     |       |               |
| Ft. P.        | $\frac{5373}{1}$ | "                  | <b>Dentalium</b> Linn.                     |                        |           |         |       |               |
|               |                  |                    | gracile. .... <i>H. &amp; M.</i>           | Mem. A. A.             | 5, N.S.   | 393     | 3     | 11a-c         |
| Ripl.         | $\frac{5374}{1}$ | "                  | <b>Drillia</b> Gray.                       |                        |           |         |       |               |
|               |                  |                    | ? distans..... <i>Conrad.</i>              | J. A. N. S.            | II, 4     | 286     | 46    | 49            |
| L. M.         | $\frac{5375}{1}$ | Fig'd.             | <b>Endoptygma</b> Gabb.                    |                        |           |         |       |               |
|               |                  |                    | umbilicatum ( <i>Tuomey</i> )              |                        |           |         |       |               |
|               |                  |                    | <i>Whitf.</i>                              | Mon. G. S. Pal. N. J.  | 18 2      | 136 136 | 17 17 | 20 20         |
|               |                  |                    | <b>Fusus</b> Lamarck.                      |                        |           |         |       |               |
|               |                  |                    | <i>bellaliratus</i> .....                  |                        |           |         |       |               |
|               |                  |                    | <i>Shumardi</i> .....                      |                        |           |         |       |               |
|               |                  |                    | <i>tenuilineatus</i> .....                 |                        |           |         |       |               |
| Cret.         | $\frac{5376}{1}$ | Type.              | <b>Globiconcha</b> d'Orbigny.              |                        |           |         |       |               |
|               |                  |                    | altispira..... <i>Whitf.</i>               | A. M. N. H.            | 3         | 440     | 11    | 4, 5          |
|               |                  |                    | ( <b>Tylostoma</b> ?)                      |                        |           |         |       |               |
| "             | $\frac{5377}{1}$ | "                  | gazellensis..... <i>Whitf.</i>             | " "                    | 3         | 439     | 11    | 1-3           |
| "             | $\frac{5378}{1}$ | "                  | ? triplica..... <i>Whitf.</i>              | " "                    | 3         | 440     | 10    | 20-22         |
| L. M.         | $\frac{5380}{1}$ | Fig'd.             | <b>Gyrodes</b> Conrad.                     |                        |           |         |       |               |
|               |                  |                    | altispira ( <i>Gabb</i> )... <i>Whitf.</i> | Mon. G. S.             | 18        | 128     | 16    | 7, 8          |
|               |                  |                    | "                                          | Pal. N. J.             | 2         | 128     | 16    | 7, 8          |
|               |                  |                    | obtusivolva ( <i>Gabb</i> ) <i>Whitf.</i>  | Mon. G. S.             | 18        | 129     | 16    | 12            |
|               |                  |                    | "                                          | Pal. N. J.             | 2         | 129     | 16    | 12            |
| "             | $\frac{5382}{1}$ | "                  | petrosus ( <i>Morton</i> ) <i>Whitf.</i>   | Mon. G. S.             | 18        | 127     | 16    | 1-3           |
|               |                  |                    | "                                          | Pal. N. J.             | 2         | 127     | 16    | 1-3           |
| .....         | $\frac{5383}{1}$ | Type.              | <b>Lunatia</b> Gray.                       |                        |           |         |       |               |
|               |                  |                    | concinna..... <i>H. &amp; M.</i>           | Mem. A. A.             | 5, N.S.   | 389     | 3     | 2a, b         |
| L. M.         | $\frac{5384}{1}$ | Fig'd.             | Halli ( <i>Gabb</i> )..... <i>Whitf.</i>   | Mon. G. S.             | 18        | 130     | 16    | 15, 16        |
|               |                  |                    | "                                          | Pal. N. J.             | 2         | 130     | 16    | 15, 16        |
| M. M.         | $\frac{5384}{2}$ | "                  | " " " " " "                                | Mon. G. S.             | 18        | 175     | 21    | 10, 11        |
|               |                  |                    | " " " " " "                                | Pal. N. J.             | 11        | 175     | 21    | 10, 11        |
| Ft. P.        | $\frac{5385}{1}$ | Type.              | obliquata..... <i>H. &amp; M.</i>          | Mem. A. A.             | 5, N.S.   | 389     | 3     | 1a, b         |



| LOCALITY.                            | REMARKS.                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mullica Hill, N. J.                  | Internal cast.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Sage Creek, Wyo.                     | <p>As <i>Fusus? tenuilineatus</i>.<br/> New genus described. A somewhat flattened and exfoliated fragment.<br/> Defined as a subgenus under <i>Fasciolaria</i>.<br/> As <i>Gladius? cheyennensis</i>. Name proposed in place of <i>Rostellaria fusiformis</i> H. &amp; M., which was preoccupied.<br/> As type of <i>Rostellaria fusiformis</i> H. &amp; M. (non Pictet &amp; Roux).<br/> Imperfect specimen, mostly a cast.</p> |
| Eufaula, Ala.<br>" "                 | <p>A chalky individual which has been nearly ruined by accidents.<br/> An imbedded individual, partly exfoliated.</p>                                                                                                                                                                                                                                                                                                            |
| Sage Creek, Wyo.                     | Two fragments were used as the types.                                                                                                                                                                                                                                                                                                                                                                                            |
| Eufaula, Ala.                        | <p>An imbedded individual, the apex of which has become disintegrated. Figure reversed in lithographing it.</p>                                                                                                                                                                                                                                                                                                                  |
| Near Burlington, N. J.               | Cast of two and a half volutions.                                                                                                                                                                                                                                                                                                                                                                                                |
| .....<br>.....<br>.....              | <p>See <i>Afer belliliratus</i>.<br/> " <i>Trachytriton Shumardi</i>.<br/> " <i>Closteriscus tenuilineatus</i>.</p>                                                                                                                                                                                                                                                                                                              |
| Ain Kisûr, Syria.                    | <p>Two internal casts. From the brown clayey limestone above the Bewerty bed.</p>                                                                                                                                                                                                                                                                                                                                                |
| Gazelle Mt., Syria.                  | <p>Two specimens with imperfect lips. From the yellowish brown clays at the summit of Gazelle Mt.</p>                                                                                                                                                                                                                                                                                                                            |
| Gazelle Hollow, Syria.               | <p>An imperfect, somewhat crushed specimen and part of the lower volution of another, silicified. From the cherts at Gazelle Hollow.</p>                                                                                                                                                                                                                                                                                         |
| Mullica Hill, N. J.                  | Internal cast.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| New Egypt, N. J.                     | Cast with some bits of shell attached.                                                                                                                                                                                                                                                                                                                                                                                           |
| Mullica Hill, N. J.                  | Internal cast of an individual of average size.                                                                                                                                                                                                                                                                                                                                                                                  |
| ?                                    | <p>As <i>Natica concinna</i>. A very young individual of a recent form. Not a fossil and not the same as <i>Lunatia concinna</i> Meek, G. S. Terr., Vol. 9, pl. 32, fig. 11.</p>                                                                                                                                                                                                                                                 |
| Mullica Hill, N. J.                  | Cast.                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Timber Creek, N. J.<br>South Dakota. | <p>Cast.<br/> As <i>Natica obliquata</i>. An individual with lip somewhat broken. From the "Great Bend" of the Missouri river below Ft. Pierre.</p>                                                                                                                                                                                                                                                                              |

Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                                       | REFERENCE.             |           |         |       |        |
|---------------|------------------|--------------------|----------------------------------------------------------------------------------|------------------------|-----------|---------|-------|--------|
|               |                  |                    |                                                                                  | Work.                  | Vol.      | P.      | Pl.   | Figs.  |
| Cret.         | $\frac{5386}{1}$ | Type.              | <b>Mangilia</b> Leach.<br>? solitaria..... <i>Whitf.</i>                         | A. M. N. H.            | 3         | 415     | 8     | 5, 6   |
| L. M.         | $\frac{5387}{1}$ | Fig'd.             | <b>Margarita</b> Leach.<br>abyssina ( <i>Gabb</i> )... <i>Whitf.</i>             | Mon. G. S.             | 18        | 133     | 17    | 1, 2   |
|               |                  |                    | "                                                                                | Pal. N. J.             | 2         | 133     | 17    | 1, 2   |
| Cret.         | $\frac{5388}{1}$ | Type.              | <b>Mesalia</b> Gray.<br>gazellensis..... <i>Whitf.</i>                           | A. M. N. H.            | 3         | 424     | 9     | 10     |
| "             | $\frac{5389}{1}$ | "                  | <b>Monodonta</b> Lamarck.<br>antiqua..... <i>Whitf.</i>                          | " "                    | 3         | 434     | 10    | 12, 13 |
| M. M.         | $\frac{5390}{1}$ | Fig'd.             | <b>Natica</b> (Adanson) Scopoli.<br>abyssina ( <i>Morton</i> ) <i>Whitf.</i>     | Mon. G. S.             | 18        | 175     | 21    | 12, 13 |
|               |                  |                    | "                                                                                | Pal. N. J.             | 2         | 175     | 21    | 12, 13 |
|               |                  |                    | <i>concinna</i> .....                                                            | .....                  | .....     | .....   | ..... | .....  |
|               |                  |                    | <i>obliquata</i> .....                                                           | .....                  | .....     | .....   | ..... | .....  |
| Cret.         | $\frac{5391}{1}$ | Type.              | ( <b>Ampullina</b> )<br>fluctuoides..... <i>Whitf.</i>                           | A. M. N. H.            | 3         | 417     | 8     | 8, 9   |
|               |                  | "                  | "                                                                                | " "                    | 3         | 417     | 8     | 10     |
|               | $\frac{5392}{1}$ | "                  | " var. acuminata. <i>Whitf.</i>                                                  | " "                    | 3         | 418     | 9     | 1, 2   |
| "             | $\frac{5393}{1}$ | "                  | <b>Nerita</b> Linn.<br>abeiensis..... <i>Whitf.</i>                              | " "                    | 3         | 431     | 10    | 1, 2   |
| "             | $\frac{5394}{1}$ | "                  | bidens..... <i>Whitf.</i>                                                        | " "                    | 3         | 432     | 10    | 3-5    |
| "             | $\frac{5395}{1}$ | "                  | pagoda..... <i>Whitf.</i>                                                        | " "                    | 3         | 432     | 10    | 6-8    |
| "             | $\frac{5396}{1}$ | "                  | <b>Neverita</b> Risso.<br>patula..... <i>Whitf.</i>                              | " "                    | 3         | 419     | 9     | 3, 4   |
| "             | $\frac{5397}{1}$ | Fig'd Sp. and G.T. | <b>Odostomopsis</b> Whitfield.<br>abeiensis ( <i>Blan.</i> ) <i>Whitf.</i>       | " "                    | 3         | 425     | 9     | 13, 14 |
| Ft. P.        | $\frac{5398}{1}$ | Sub-G. & Sp. Type. | <b>Oligoptycha</b> Meek.....                                                     | .....                  | .....     | .....   | ..... | .....  |
|               |                  |                    | concinus..... <i>H. &amp; M. Meek.</i>                                           | Mem. A. A. G. S. Terr. | 5, N.S. 9 | 390 283 | 3     | 4a-d   |
| M. M.         | $\frac{5399}{1}$ | Fig'd.             | <b>Perissolax</b> Gabb.<br>trivolva ( <i>Gabb</i> )... <i>Whitf.</i>             | Mon. G. S.             | 18        | 172     | 21    | 2, 3   |
|               |                  |                    | "                                                                                | Pal. N. J.             | 2         | 172     | 21    | 2, 3   |
| Cret.         | $\frac{5400}{1}$ | Type.              | <b>Philine</b> Ascanius.<br>( <b>Megistostoma</b> )<br>patula..... <i>Whitf.</i> | A. M. N. H.            | 3         | 434     | 10    | 16, 17 |
| M. M.         | $\frac{5401}{1}$ | Gen. and Sp. Type. | <b>Pleurotrema</b> Whitfield.<br>solariforme..... <i>Whitf.</i>                  | Mon. G. S.             | 18        | 180     | 22    | 10, 11 |
|               |                  |                    | "                                                                                | Pal. N. J.             | 2         | 180     | 22    | 10, 11 |
| Cret.         | $\frac{5402}{1}$ | Type.              | <b>Potamides</b> Brongniart.<br>distortus..... <i>Whitf.</i>                     | A. M. N. H.            | 3         | 429     | 9     | 19-21  |
| L. M.         | $\frac{5403}{1}$ | "                  | <b>Pyrifusus</b> Conrad.<br>McFarlandi..... <i>Whitf.</i>                        | Mon. G. S.             | 18        | 52      | 4     | 14, 15 |
|               |                  |                    | "                                                                                | Pal. N. J.             | 2         | 52      | 4     | 14, 15 |
| Ripl.         | $\frac{5404}{1}$ | Gen. and Sp. Type. | subdensatus..... <i>Conrad.</i>                                                  | J. A. N. S.            | II, 3     | 332     | 35    | 12     |
|               |                  |                    | "                                                                                | " "                    | II, 4     | ....    | 47    | 2      |
|               |                  |                    | <i>Whitf.</i>                                                                    | Mon. G. S.             | 18        | 48      | 4     | 1-3    |
| L. M.         | $\frac{5405}{1}$ | Type.              | <b>Pyropsis</b> Conrad.<br>? obesa..... <i>Whitf.</i>                            | Pal. N. J.             | 2         | 48      | 4     | 1-3    |
|               |                  |                    | "                                                                                | Mon. G. S.             | 18        | 40      | 3     | 12, 13 |
|               |                  |                    |                                                                                  | Pal. N. J.             | 2         | 40      | 3     | 12, 13 |



| LOCALITY.              | REMARKS.                                                                                            |
|------------------------|-----------------------------------------------------------------------------------------------------|
| Gazelle Mt., Syria.    | Entire, though the lip has become somewhat broken. From the brown clays near the top of Gazelle Mt. |
| Near Burlington, N. J. | An internal cast.                                                                                   |
| Gazelle Mt., Syria.    | Imperfect as to aperture. From the brown clay near the summit of Gazelle Mt.                        |
| Gazelle Hollow, Syria. | Entire. From the cherts of Gazelle Hollow.                                                          |
| Timber Creek, N. J.    | Decomposed and gone.                                                                                |
| .....                  | See <i>Lunatia concinna</i> .                                                                       |
| .....                  | " " <i>obliquata</i> .                                                                              |
| .....                  | " <i>Amauropsis paludiniiformis</i> .                                                               |
| Bewerty, Syria.        | A large individual from the Bewerty bed.                                                            |
| Near Abeih, Syria.     | A small individual showing the color markings. From the Abeih sandstone at the "Olive locality."    |
| Gazelle Mt., Syria.    | Entire individual, rather small. From the cherts of the Gazelle mountain.                           |
| Near Abeih, Syria.     | Entire. From the Abeih sandstone at the "Olive locality."                                           |
| " "                    | Two indivs. From the Abeih sandstone at the "Olive locality."                                       |
| " "                    | Two indivs. From the Abeih sandstone at the "Olive locality."                                       |
| Duccûn, Syria.         | Entire individual showing the color markings of the surface. From the Abeih sandstone.              |
| Near Abeih, Syria.     | A specimen with imperfect lip. From the Abeih sandstone at the "Olive locality."                    |
| .....                  | Defined as a subgenus under <i>Cinulia</i> .                                                        |
| .....                  | As <i>Acteon concinnus</i> .                                                                        |
| Sage Creek, Wyo.       | Subgenus described. A nearly perfect individual.                                                    |
| Timber Creek, N. J.    | The specimen has decomposed and disappeared.                                                        |
| Duccûn, Syria.         | A somewhat worn individual. From the Abeih sandstone.                                               |
| Timber Creek, N. J.    | Cast of a large individual.                                                                         |
| Duccûn, Syria.         | Two individuals and the lower volution of a third. From the Abeih sandstone.                        |
| Mullica Hill, N. J.    | Internal cast.                                                                                      |
| Tippah Co., Miss.      | Individual.                                                                                         |
| Mullica Hill, N. J.    | Nearly entire internal cast.                                                                        |

Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                                       | REFERENCE.               |              |            |            |                |
|---------------|------------------|--------------------|----------------------------------------------------------------------------------|--------------------------|--------------|------------|------------|----------------|
|               |                  |                    |                                                                                  | Work.                    | Vol.         | P.         | Pl.        | Figs.          |
|               |                  |                    | <b>Rostellaria</b> Lamarck.<br><i>fusiformis</i> H. & M.<br>(non Picket & Roux). | .....                    | .....        | .....      | .....      | .....          |
| Cret.         | $\frac{5406}{1}$ | Type.              | <b>Scalaria</b> Lamarck.<br><i>bewertensis</i> ..... <i>Whitf.</i>               | A. M. N. H.              | 3            | 421        | 9          | 8, 9           |
| "             | $\frac{5407}{1}$ | "                  | <i>novemvaricosa</i> .... <i>Whitf.</i>                                          | " "                      | 3            | 422        | 9          | 7              |
| Ripl.         | $\frac{5408}{1}$ | "                  | <b>Strepsidura</b> Swainson.<br><i>ripleyana</i> ..... <i>Conrad.</i>            | J. A. N. S.              | II, 4        | 286        | 46         | 42             |
| Cret.         | $\frac{5409}{1}$ | "                  | <b>Strombus</b> Linn.<br><i>?crassiliratus</i> ..... <i>Whitf.</i>               | A. M. N. H.              | 3            | 416        | 8          | 7              |
| "             | $\frac{5410}{1}$ | "                  | <b>Tornatella</b> Lamarck.<br><i>abeiensis</i> ..... <i>Whitf.</i>               | " "                      | 3            | 437        | 11         | 8, 9           |
| Ft. P.        | $\frac{5411}{1}$ | "                  | <b>Trachytriton</b> Meek.<br><i>Shumardi</i> ..... <i>H. &amp; M.</i>            | Mem. A. A.               | 5, N.S.      | 391        | 3          | 6a-c           |
| "             | $\frac{5412}{1}$ | Gen. and Sp. Type. | <i>vinculum</i> ..... <i>H. &amp; M.</i><br><i>Meek.</i>                         | " "<br>G. S. Terr.       | 5, N.S.<br>9 | 390<br>303 | 3<br>..... | 5a, b<br>..... |
| Cret.         | $\frac{5413}{1}$ | Type.              | <b>Trochus</b> Linn.<br><i>striatofundus</i> ..... <i>Whitf.</i>                 | A. M. N. H.              | 3            | 433        | 10         | 9-10           |
| "             | $\frac{5414}{1}$ | "                  | <b>Tubulostium</b> Stoliczka.<br><i>?rugosum</i> ..... <i>Whitf.</i>             | " "                      | 3            | 424        | 9          | 15, 16         |
| Ripl.         | $\frac{5415}{1}$ | "                  | <b>Turbonilla</b> Leach.<br><i>laqueata</i> ..... <i>Conrad.</i>                 | J. A. N. S.              | II, 4        | 288        | 46         | 36             |
| "             | $\frac{5416}{1}$ | "                  | <i>melanopsis</i> ..... <i>Conrad.</i>                                           | " "                      | II, 4        | 287        | 46         | 35             |
| Cret.         | $\frac{5417}{1}$ | "                  | <b>Tylostoma</b> Sharpe.<br><i>Martini</i> ..... <i>Whitf.</i>                   | A. M. N. H.              | 3            | 439        | 11         | 6, 7           |
| "             | $\frac{5418}{1}$ | "                  | <b>Vertagus</b> Klein.<br><i>coloratus</i> ..... <i>Whitf.</i>                   | " "                      | 3            | 429        | 9          | 17, 18         |
| M. M.         | $\frac{5419}{1}$ | Fig'd.             | <b>Volutoderma</b> Gabb.<br><i>Abbotti</i> ( <i>Gabb</i> )... <i>Whitf.</i>      | Mon. G. S.<br>Pal. N. J. | 18<br>2      | 173<br>173 | 21<br>21   | 6, 7<br>6, 7   |
| L. M.         | $\frac{5420}{1}$ | Type.              | <i>ovatum</i> ..... <i>Whitf.</i>                                                | Mon. G. S.<br>Pal. N. J. | 18<br>2      | 91<br>91   | 10<br>10   | 3, 4<br>3, 4   |
| Cret.         | $\frac{5421}{1}$ | "                  | <b>Volutomorpha</b> Gabb.<br><i>?orientalis</i> ..... <i>Whitf.</i>              | A. M. N. H.              | 3            | 414        | 8          | 3, 4           |

Class CEPHALOPODA.

|        |                  |        |                                                                             |                          |         |            |          |            |
|--------|------------------|--------|-----------------------------------------------------------------------------|--------------------------|---------|------------|----------|------------|
| Ft. P. | $\frac{5422}{1}$ | Type.  | <b>Ammonites</b> Breynius.<br><i>complexus</i> ..... <i>H. &amp; M.</i>     | Mem. A. A.               | 5, N.S. | 394        | 4        | 1 a-f      |
| L. M.  | $\frac{5423}{1}$ | Fig'd. | <i>percarinatus</i> .....<br><i>Vanuxemi</i> ( <i>Mort.</i> ) <i>Whitf.</i> | Mon. G. S.<br>Pal. N. J. | 18<br>2 | 253<br>253 | 42<br>42 | 3-5<br>3-5 |



| LOCALITY.                           | REMARKS.                                                                                                                                                             |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                               | See <i>Cryptorhytis cheyennensis</i> .                                                                                                                               |
| Bewerty, Syria.                     | Two specimens lacking apex and aperture. From the yellow clays above the Abeih sandstone.                                                                            |
| Near Abeih, Syria.                  | Entire, except as to aperture. From the Abeih sandstone at the "Olive locality."                                                                                     |
| Tippah Co., Miss.                   | An individual with lip somewhat broken.                                                                                                                              |
| Between Shimlan and Aithath, Syria. | Internal cast. From the brown clayey limestone above the Bewerty beds.                                                                                               |
| Near Abeih, Syria.                  | Entire, except that the aperture is imperfect. From the Abeih sandstone at the "Olive locality."                                                                     |
| South Dakota.                       | As <i>Fusus Shumardii</i> . A small individual. From the "Great Bend" of the Missouri river below Fort Pierre.                                                       |
| " "                                 | As <i>Buccinum? vinculum</i> .                                                                                                                                       |
| .....                               | New genus described. An individual, imperfect as to aperture. From the "Great Bend" of the Missouri river below Ft. Pierre.                                          |
| Near Abeih, Syria.                  | A large and a small individual. From the Abeih sandstone at the "Olive locality."                                                                                    |
| Bewerty, Syria.                     | Lacks the aperture. From the yellowish brown clay.                                                                                                                   |
| Tippah Co., Miss.                   | Figure 35 in explanation of plate by typographical error. An individual the lip of which has become broken.                                                          |
| " "                                 | As <i>Turbonilla (Chemnitzia) laqueata</i> .<br>Fig. 36 in expl. plate by typogr. error. A nearly entire individual.<br>As <i>Turbonilla (Chemnitzia) laqueata</i> . |
| Ghurzûz, Syria.                     | Silicified. From the Gazelle cherts.                                                                                                                                 |
| Klelay, Syria.                      | Two individuals. From the Abeih sandstone.                                                                                                                           |
| Timber Creek, N. J.                 | Decomposed and gone.                                                                                                                                                 |
| Mullica Hill, N. J.                 | Internal cast.                                                                                                                                                       |
| Duccûn, Syria.                      | Entire, except that the lip in the figure was completed from another individual. From the Abeih sandstone.                                                           |
| South Dakota.                       | Nearly entire cast of a small individual retaining a little shell, and part of a larger specimen. From the "Great Bend" of the Missouri river below Ft. Pierre.      |
| .....                               | See <i>Prionotropis percarinata</i> .                                                                                                                                |
| Burlington Co., N. J.               | Septate cast of about three volutions.                                                                                                                               |

Class CEPHALOPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                                 | REFERENCE.  |         |     |     |       |
|---------------|------------------|-------------------|--------------------------------------------------------------------------------------------|-------------|---------|-----|-----|-------|
|               |                  |                   |                                                                                            | Work.       | Vol.    | P.  | Pl. | Figs. |
|               |                  |                   | <b>Ancylloceras</b> d'Orbigny.<br><i>Nicolletii</i> .....                                  |             |         |     |     |       |
| Ft. P.        | $\frac{5424}{1}$ | Fig'd.            | <b>Baculites</b> Lamarck.<br>compressus ( <i>Say</i> ) <i>H. &amp; M.</i>                  | Mem. A. A.  | 5, N.S. | 400 | 5   | 2a, c |
| "             | $\frac{5424}{2}$ | "                 | " " "                                                                                      | " "         | 5, N.S. | 400 | 5   | 2b    |
| Fox Hills.    | $\frac{5425}{1}$ | Type.             | grandis..... <i>H. &amp; M.</i>                                                            | " "         | 5, N.S. | 402 | 6   | 8, 9  |
|               |                  |                   |                                                                                            |             |         |     | 7   | 10    |
|               |                  |                   |                                                                                            |             |         |     | 8   | 1, 2  |
| Ft. P.        | $\frac{5426}{1}$ | Fig'd.            | ovatus ( <i>Say</i> ).... <i>H. &amp; M.</i>                                               | " "         | 5, N.S. | 399 | 5   | 1a, c |
| "             | $\frac{5426}{2}$ | "                 | " " " " " "                                                                                | " "         | 5, N.S. | 399 | 5   | 1b    |
|               |                  |                   |                                                                                            |             |         |     | 6   | 6, 7  |
| "             | "                | "                 | " " " " " "                                                                                | " "         | 5, N.S. | 399 | 6   | 1-5 a |
| L. M.         | $\frac{5426}{3}$ | "                 | " " " " <i>Whitf.</i>                                                                      | Mon. G. S.  | 18      | 275 | 46  | 3-7   |
|               |                  |                   | " " " " "                                                                                  | Pal. N. J.  | 2       | 275 | 46  | 3-7   |
| "             | $\frac{5427}{1}$ | "                 | <b>Belemnitella</b> d'Orbigny.<br><i>americana</i> ( <i>Mort.</i> ) <i>Whitf.</i>          | Mon. G. S.  | 18      | 280 | 47  | 8, 9  |
|               |                  |                   | " " " " "                                                                                  | Pal. N. J.  | 2       | 280 | 47  | 8, 9  |
|               |                  |                   | <b>Hamites</b> Parkinson.<br><i>Mortoni</i> .....                                          |             |         |     |     |       |
|               |                  |                   | <b>Helicoceras</b> d'Orbigny.<br><i>Mortoni</i> ..... <i>H. &amp; M.</i>                   | Mem. A. A.  | 5, N.S. | 396 | 4   | 3 a-c |
| "             | $\frac{5429}{1}$ | "                 | <i>Nicolleti</i> ..... <i>H. &amp; M.</i>                                                  | " "         | 5, N.S. | 397 | 4   | 4     |
| L. M.         | $\frac{5430}{1}$ | Fig'd.            | <b>Nautilus</b> Breynius.<br><i>Dekayi</i> ( <i>Morton</i> ) <i>Whitf.</i>                 | Mon. G. S.  | 18      | 243 | 37  | 5, 6  |
|               |                  |                   | " " " " "                                                                                  | Pal. N. J.  | 2       | 243 | 37  | 5, 6  |
| Ft. P.        | $\frac{5431}{1}$ | Type.             | <b>Placenticeras</b> Meek.<br><i>Whitfieldi Hyatt</i> ,<br><i>var. tuberculatum Hyatt.</i> | Mon. G. S.  | ?       | ?   | ?   | ?     |
| Ft. B.        | $\frac{5432}{1}$ | "                 | <b>Prionotropis</b> Meek.....<br><i>percarinata</i> ..... <i>H. &amp; M.</i>               | Mem A. A.   | 5, N.S. | 396 | 4   | 2b    |
| Ripl.         | $\frac{5433}{1}$ | "                 | <b>Turrilites</b> Lamarck.<br><i>spinifer</i> ..... <i>Conrad.</i>                         | J. A. N. S. | II, 4   | 284 |     |       |

Subkingdom VERMES.

|        |                  |        |                                                                |            |         |  |   |      |
|--------|------------------|--------|----------------------------------------------------------------|------------|---------|--|---|------|
| Ft. P. | $\frac{5434}{1}$ | Fig'd. | <b>Planarian</b> worms,<br>tracks of ?..... <i>H. &amp; M.</i> | Mem. A. A. | 5, N.S. |  | 7 | 3, 4 |
|--------|------------------|--------|----------------------------------------------------------------|------------|---------|--|---|------|

Subkingdom ARTHROPODA.

|        |                  |       |                                                                    |            |         |     |   |       |
|--------|------------------|-------|--------------------------------------------------------------------|------------|---------|-----|---|-------|
| Ft. P. | $\frac{5435}{1}$ | Type. | <b>Callianassa</b> Leach.<br><i>Danae</i> ..... <i>H. &amp; M.</i> | Mem. A. A. | 5, N.S. | 379 | 1 | 1a, b |
|--------|------------------|-------|--------------------------------------------------------------------|------------|---------|-----|---|-------|



| LOCALITY.                             | REMARKS.                                                                                                                                                                                                                                                           |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                                 | See <i>Helicoceras Nicolleti</i> .                                                                                                                                                                                                                                 |
| South Dakota.                         | Part of the chamber of habitation. From the "Great Bend" of the Missouri river below Ft. Pierre.                                                                                                                                                                   |
| Sage Creek, Wyo.                      | Specimen shows ten chambers of a large individual.                                                                                                                                                                                                                 |
| Bear Creek, S. D.<br>Sage Creek, Wyo. | A septate cast and part of the cast of an outer chamber.<br>Considerable portion of the outer chamber of a large individual.                                                                                                                                       |
| South Dakota.                         | Specimen showing 3 chambers and part of the chamber of habitation.<br>From the "Great Bend" of the Missouri river below Ft. Pierre.                                                                                                                                |
| " "                                   | Parts of five small individuals. From the "Great Bend" of the Missouri river below Ft. Pierre.                                                                                                                                                                     |
| Mullica Hill, N. J.                   | Two internal casts, septate fragments.                                                                                                                                                                                                                             |
| Marlborough, N. J.                    | Phragmocone with lower end gone.                                                                                                                                                                                                                                   |
| .....                                 | See <i>Helicoceras Mortoni</i> .                                                                                                                                                                                                                                   |
| South Dakota.                         | As <i>Hamites Mortoni</i> . Septate cast retaining some shell. From the "Great Bend" of the Missouri river below Ft. Pierre.                                                                                                                                       |
| " "                                   | As <i>Ancyloceras? Nicolletii</i> . From the "Great Bend" of the Missouri river below Ft. Pierre.                                                                                                                                                                  |
| Near Mullica Hill, N. J.              | Internal cast of a large individual.                                                                                                                                                                                                                               |
| Sage Creek, Wyo.                      | Specimen retaining much of the shell. Publication is still in MSS.                                                                                                                                                                                                 |
| .....                                 | Defined as a subgenus under <i>Prionocyclus</i>                                                                                                                                                                                                                    |
| Nebraska.                             | As <i>Ammonites percarinatus</i> . Cast and imprint of a small indiv. in soft shale. Regarded by Meek, G. S. Terr., Vol. 9, p. 455, as a synonym of <i>Ammonites Woolgari</i> Mantell. From the Missouri river, five miles below the mouth of the Vermilion river. |
| Eufaula, Ala.                         | An imbedded individual and two imbedded fragments constitute the type series.                                                                                                                                                                                      |

Class ANNELIDA.

|          |                                                                                                        |
|----------|--------------------------------------------------------------------------------------------------------|
| Wyoming. | Imprints in brown (fig. 3) and gray (fig. 4) calcareous shale. From head of the Little Missouri river. |
|----------|--------------------------------------------------------------------------------------------------------|

Class CRUSTACEA.

|               |                                                                                                                |
|---------------|----------------------------------------------------------------------------------------------------------------|
| South Dakota. | The fragment as described and figured, imbedded. From the "Great Bend" of the Missouri river below Ft. Pierre. |
|---------------|----------------------------------------------------------------------------------------------------------------|





## Class REPTILIA.

| LOCALITY.              | REMARKS.                                                                                |
|------------------------|-----------------------------------------------------------------------------------------|
| Near Middletown, N. J. | Parts of the two rami of a lower jaw and a coronoid bone, as represented on the plates. |

## Tertiary.

## Kingdom PLANTÆ.

## Subkingdom

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                                                                                                                                    | REFERENCE.                                                |                                              |                                               |     |                                 |
|------------------|------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------|-----------------------------------------------|-----|---------------------------------|
|                  |                  |                      |                                                                                                                                                                                               | Work.                                                     | Vol.                                         | P.                                            | Pl. | Figs.                           |
| Eoc.             | <u>5438</u><br>1 | Type.                | <b>Apeibopsis</b> Heer.<br>Gaudini . . . . . <i>Lesq.</i><br><i>Hitchcock.</i>                                                                                                                | Am. J. S.<br>Geol. Vt.<br>" "                             | II, 32<br>I<br>2                             | 358<br>231<br>715                             |     |                                 |
| "                | <u>5439</u><br>1 | "                    | Heeri . . . . . <i>Lesq.</i><br><i>Hitchcock.</i><br><br>" <i>Lesq.</i>                                                                                                                       | Am. J. S.<br>" "<br>Geol. Vt.<br>" "                      | II, 32<br>II, 15<br>I<br>2                   | 358<br>98<br>99<br>230<br>715                 |     | 139, 140<br>4<br>5<br>131-133   |
| "                | <u>5440</u><br>1 | Type.                | <b>Aristolochia</b> Schimper.<br>curvata . . . . . <i>Lesq.</i><br><i>Hitchcock</i><br>" <i>Lesq.</i>                                                                                         | Am. J. S.<br>" "<br>Geol. Vt.<br>" "                      | II, 32<br>II, 15<br>2                        | 359<br>100<br>715                             |     | II<br>135, 136                  |
| "                | <u>5441</u><br>1 | "                    | obscura . . . . . <i>Lesq.</i><br><i>Hitchcock.</i><br>" <i>Lesq.</i>                                                                                                                         | Am. J. S.<br>Geol. Vt.<br>" "                             | II, 32<br>I<br>2                             | 359<br>231<br>715                             |     | 137, 138, 141                   |
| "                | <u>5442</u><br>1 | Fig'd.               | œningensis ( <i>Heer</i> ) . . <i>Lesq.</i><br><i>Hitchcock.</i><br>" <i>Lesq.</i>                                                                                                            | Am. J. S.<br>" "<br>Geol. Vt.<br>" "                      | II, 32<br>II, 15<br>I<br>2                   | 359<br>99<br>230<br>715                       |     | 10<br>134                       |
|                  |                  |                      | <b>Carpinus</b> Linn.<br><i>grandis</i> <i>Lesq.</i> (non <i>Heer</i> ).                                                                                                                      |                                                           |                                              |                                               |     |                                 |
| Eoc.             | <u>5443</u><br>1 | Type.                | <b>Carpolithes</b> Gervais.<br>brandonensis, <i>var.</i><br>elongatus <i>Lesq.</i><br><i>Hitchcock.</i><br>" <i>Lesq.</i>                                                                     | Am. J. S.<br>" "<br>Geol. Vt.<br>" "                      | II, 32<br>II, 15<br>I<br>2                   | 356<br>97<br>229<br>713                       |     | I<br>111-113                    |
| "                | <u>5444</u><br>1 | "                    | brandonensis <i>var.</i><br>obtusus <i>Lesq.</i><br><i>Hitchcock.</i><br>" <i>Lesq.</i><br><i>brandoniana</i> , <i>var.</i> α,<br>elongata.<br><i>brandoniana</i> , <i>var.</i> β,<br>obtusa. | Am. J. S.<br>Geol. Vt.<br>" "<br>" "<br>" "<br>" "<br>" " | II, 32<br>I<br>2<br>" "<br>" "<br>" "<br>" " | 356<br>229<br>713<br>" "<br>" "<br>" "<br>" " |     | 114-117                         |
| Eoc.             | <u>5445</u><br>1 | Type.                | bursiformis . . . . . <i>Lesq.</i><br><i>Hitchcock.</i><br>" <i>Lesq.</i>                                                                                                                     | Am. J. S.<br>Geol. Vt.<br>" "                             | II, 32<br>I<br>2                             | 359<br>231<br>715                             |     | 146, 147                        |
| "                | <u>5446</u><br>1 | "                    | fissilis . . . . . <i>Lesq.</i><br><i>Hitchcock.</i><br>" <i>Lesq.</i>                                                                                                                        | Am. J. S.<br>" "<br>Geol. Vt.<br>" "                      | II, 32<br>II, 15<br>I<br>2                   | 356<br>98<br>229<br>713                       |     | 2, 3<br>118, 119<br>124         |
| "                | <u>5447</u><br>1 | "                    | Grayana . . . . . <i>Lesq.</i><br><i>Hitchcock.</i><br>" <i>Lesq.</i>                                                                                                                         | Am. J. S.<br>Geol. Vt.<br>" "                             | II, 32<br>I<br>2                             | 356<br>230<br>714                             |     | 122                             |
| "                | <u>5448</u><br>1 | "                    | irregularis . . . . . <i>Lesq.</i><br><i>Hitchcock.</i><br>" <i>Lesq.</i>                                                                                                                     | Am. J. S.<br>" "<br>Geol. Vt.<br>" "                      | II, 32<br>II, 15<br>I<br>2                   | 356<br>99<br>230<br>714                       |     | 6<br>120, 121,<br>123, 125, 128 |
| "                | <u>5449</u><br>1 | "                    | Lescurii . . . . . <i>C. H. H.</i>                                                                                                                                                            | P. S. N. H.                                               | I                                            | 95                                            |     | 1, 5                            |
| "                | <u>5450</u><br>1 | Fig'd.               | venosus ( <i>Sternb.</i> )? <i>Lesq.</i><br><i>Hitchcock.</i><br>" <i>Lesq.</i>                                                                                                               | Am. J. S.<br>" "<br>Geol. Vt.<br>" "                      | II, 32<br>II, 15<br>I<br>2                   | 361<br>101<br>231<br>717                      |     | 20<br>157-160                   |



PHANEROGAMIA.

Class ANGIOSPERMÆ.

| LOCALITY.                                      | REMARKS.                                                                                                                    |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| .....<br>Brandon, Vt.                          | Without name.<br>Two specimens.                                                                                             |
| .....<br>.....<br>.....<br>Brandon, Vt.        | Without name.<br>Without name.<br>Without name.<br>Three specimens.                                                         |
| .....<br>.....<br>Brandon, Vt.                 | Without name.<br>Without name.<br>Two specimens.                                                                            |
| .....<br>Brandon, Vt.                          | Without name.<br>Three specimens,                                                                                           |
| .....<br>.....<br>Brandon, Vt.                 | Without name.<br>Without name.<br>The specimen described and figured.                                                       |
| .....                                          | See <i>Drupa rhabdosperma</i> .                                                                                             |
| .....<br>.....<br>.....<br>Brandon, Vt.        | As <i>Carpolithes brandoniana</i> , var. $\alpha$ , <i>elongata</i> .<br>Without name.<br>Without name.<br>Three specimens. |
| .....<br>.....<br>Brandon, Vt.                 | As <i>Carpolithes brandoniana</i> var. $\beta$ , <i>obtusa</i> .<br>Without name.<br>Four specimens.                        |
| .....                                          | See <i>Carpolithes brandonensis</i> , var. <i>elongatus</i> .                                                               |
| .....                                          | “ “ “ var. <i>obtusus</i> .                                                                                                 |
| .....<br>Brandon, Vt.                          | Without name.<br>Two specimens.                                                                                             |
| .....<br>.....<br>.....<br>Brandon, Vt.        | Without name.<br>Without name.<br>Without name.<br>Three specimens referred to these figures by Prof. E. Hitchcock.         |
| .....<br>Brandon, Vt.                          | Without name.<br>A single specimen is marked as the type.                                                                   |
| .....<br>.....<br>.....<br>Brandon, Vt.<br>“ “ | Without name.<br>Without name.<br>Five specimens.<br>A single specimen.                                                     |
| .....<br>.....<br>Brandon, Vt.                 | Without name.<br>Without name.<br>Two imbedded nuts and two fragments.                                                      |

Class ANGIOSPERMÆ—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                                                       | REFERENCE.                           |                            |                          |      |                          |
|---------------|------------------|-------------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------------------|--------------------------|------|--------------------------|
|               |                  |                   |                                                                                                                  | Work.                                | Vol.                       | P.                       | Pl.  | Figs.                    |
| Eoc.          | <u>5451</u><br>1 | Type.             | <b>Carya</b> Nuttall.<br>vermontana..... <i>Lesq.</i><br><i>Hitchcock.</i><br><i>Lesq.</i>                       | Am. J. S.<br>Geol. Vt.<br>" "        | II, 32<br>I<br>2           | 357<br>230<br>714        | .... | 130<br>.....             |
| "             | <u>5452</u><br>1 | "                 | verrucosa..... <i>Lesq.</i><br><i>Hitchcock.</i><br><i>Lesq.</i>                                                 | Am. J. S.<br>Geol. Vt.<br>" "        | II, 32<br>I<br>2           | 357<br>230<br>714        | .... | 129<br>.....             |
| "             | <u>5453</u><br>1 | "                 | <b>Cinnamomum</b> Linn.<br>novæ-angliæ..... <i>Lesq.</i><br><i>Hitchcock.</i><br>"<br><i>Lesq.</i>               | Am. J. S.<br>" "<br>Geol. Vt.<br>" " | II, 32<br>II, 15<br>I<br>2 | 360<br>100<br>231<br>716 | .... | 16<br>148<br>.....       |
| "             | <u>5454</u><br>1 | "                 | <b>Drupa</b> Göppert.<br>rhabdosperma..... <i>Lesq.</i><br><i>Hitchcock.</i><br>"<br><i>Lesq.</i>                | Am. J. S.<br>" "<br>Geol. Vt.<br>" " | II, 32<br>II, 15<br>I<br>2 | 360<br>100<br>231<br>716 | .... | 18, 19<br>150<br>.....   |
| "             | "                | Fig'd.            | " ..... "<br><i>Hitchcock.</i><br>"<br><i>Lesq.</i>                                                              | Am. J. S.<br>" "<br>Geol. Vt.<br>" " | II, 32<br>II, 15<br>I<br>2 | 360<br>100<br>231<br>716 | .... | 15<br>151<br>.....       |
| "             | <u>5455</u><br>1 | Type.             | <b>Fagus</b> Linn.<br>Hitchcocki..... <i>Lesq.</i><br><i>Hitchcock.</i><br>"<br><i>Lesq.</i>                     | Am. J. S.<br>" "<br>Geol. Vt.<br>" " | II, 32<br>II, 15<br>I<br>2 | 357<br>100<br>230<br>714 | .... | 12<br>126, 127<br>.....  |
| "             | <u>5456</u><br>1 | "                 | <b>Illicium</b> Linn.<br>lignitum..... <i>Lesq.</i><br><i>Hitchcock.</i><br>"<br><i>Lesq.</i>                    | Am. J. S.<br>" "<br>Geol. Vt.<br>" " | II, 32<br>II, 15<br>I<br>2 | 360<br>100<br>231<br>716 | .... | 17<br>149<br>.....       |
| "             | <u>5457</u><br>1 | Fig'd.            | <b>Leguminosites</b> Bowerbank.<br>pisiformis ( <i>Heer</i> )? <i>Lesq.</i><br><i>Hitchcock.</i><br><i>Lesq.</i> | Am. J. S.<br>Geol. Vt.<br>" "        | II, 32<br>I<br>2           | 361<br>231<br>716        | .... | 152<br>.....             |
| "             | <u>5458</u><br>1 | Type.             | <b>Nyssa</b> Linn.<br>complanata..... <i>Lesq.</i><br><i>Hitchcock.</i><br>"<br><i>Lesq.</i>                     | Am. J. S.<br>" "<br>Geol. Vt.<br>" " | II, 32<br>II, 15<br>I<br>2 | 361<br>100<br>231<br>717 | .... | 13<br>153<br>.....       |
| "             | <u>5459</u><br>1 | "                 | lævigata..... <i>Lesq.</i><br><i>Hitchcock.</i><br><i>Lesq.</i>                                                  | Am. J. S.<br>Geol. Vt.<br>" "        | II, 32<br>I<br>2           | 361<br>231<br>717        | .... | 156<br>.....             |
| "             | <u>5460</u><br>1 | "                 | microcarpa..... <i>Lesq.</i><br><i>Hitchcock.</i><br>"<br><i>Lesq.</i>                                           | Am. J. S.<br>" "<br>Geol. Vt.<br>" " | II, 32<br>II, 15<br>I<br>2 | 361<br>100<br>231<br>717 | .... | 14<br>154<br>.....       |
| "             | <u>5460</u><br>1 | Fig'd.            | " ? "<br><i>Hitchcock.</i><br><i>Lesq.</i>                                                                       | Am. J. S.<br>Geol. Vt.<br>" "        | II, 32<br>I<br>2           | 361<br>231<br>717        | .... | 155<br>.....             |
| "             | <u>5461</u><br>1 | Type.             | <b>Sapindus</b> Linn.<br>americanus..... <i>Lesq.</i><br><i>Hitchcock.</i><br>"<br><i>Lesq.</i>                  | Am. J. S.<br>" "<br>Geol. Vt.<br>" " | II, 32<br>II, 15<br>I<br>2 | 359<br>99<br>231<br>715  | .... | 7, 8<br>142-145<br>..... |



| LOCALITY.             | REMARKS.                                                                              |
|-----------------------|---------------------------------------------------------------------------------------|
| .....<br>Brandon, Vt. | Without name.<br>The specimen described.                                              |
| .....<br>Brandon, Vt. | Without name.<br>A single specimen.                                                   |
| .....<br>Brandon, Vt. | Without name.<br>Without name.<br>Two specimens, one of which was figured.            |
| .....<br>Brandon, Vt. | Without name.<br>Without name.<br>Two specimens.<br>As <i>Carpinus grandis</i> Heer?  |
| .....<br>Brandon, Vt. | Without name.<br>Without name.<br>As <i>Carpinus grandis</i> Heer? A single specimen. |
| .....<br>Brandon, Vt. | Without name.<br>Without name.<br>Two specimens.                                      |
| .....<br>Brandon, Vt. | Without name.<br>Without name.<br>A single specimen.                                  |
| .....<br>Brandon, Vt. | Without name.<br>Two specimens.                                                       |
| .....<br>Brandon, Vt. | Without name.<br>Without name.<br>A single specimen.                                  |
| .....<br>Brandon, Vt. | Without name.<br>Three specimens.                                                     |
| .....<br>Brandon, Vt. | Without name.<br>Without name.<br>A single specimen.                                  |
| .....<br>Brandon, Vt. | Without name.<br>A single specimen.                                                   |
| .....<br>Brandon, Vt. | Without name.<br>Without name.<br>Two whole and two half seeds.                       |

| Kingdom ANIMALIA. |                  |                      |                                    | Subkingdom  |       |       |       |       |
|-------------------|------------------|----------------------|------------------------------------|-------------|-------|-------|-------|-------|
| Geol.<br>Subdiv.  | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.         | REFERENCE.  |       |       |       |       |
|                   |                  |                      |                                    | Work.       | Vol.  | P.    | Pl.   | Figs. |
| Mioc.             | $\frac{5462}{1}$ | Fig'd.               | <b>Astræa</b> Gmelin.              |             |       |       |       |       |
|                   |                  |                      | <i>bella</i> .....                 | .....       | ..... | ..... | ..... |       |
|                   |                  |                      | <b>Astrangia</b> Edw. & Haime.     |             |       |       |       |       |
|                   |                  |                      | <i>bella (Con.)... T. &amp; H.</i> | P. F. S. C. | ..... | I     | I     | 1, 1a |

Subkingdom ECHINODERMATA.

|       |                  |        |                                       |             |       |       |   |      |
|-------|------------------|--------|---------------------------------------|-------------|-------|-------|---|------|
| Mioc. | $\frac{5463}{1}$ | Fig'd. | <b>Amphidetus</b> Agassiz.            |             |       |       |   |      |
|       |                  |        | <i>orthonotus (Con.) T. &amp; H.</i>  | P. F. S. C. | ..... | ..... | 2 | 1-1c |
| "     | $\frac{5464}{1}$ | "      | <b>Encope</b> Agassiz.                |             |       |       |   |      |
|       |                  |        | <i>macrophora (Rav.) T. &amp; H.</i>  | " "         | ..... | 2     | I | 3-3b |
| "     | $\frac{5465}{1}$ | "      | <b>Mellita</b> Klein.                 |             |       |       |   |      |
|       |                  |        | <i>caroliniana (Rav.) T. &amp; H.</i> | " "         | ..... | 3     | I | 4-4b |

MOLLUSCOIDEA.

|       |                  |        |                                       |             |       |       |       |        |
|-------|------------------|--------|---------------------------------------|-------------|-------|-------|-------|--------|
| Mioc. | $\frac{5466}{1}$ | Type.  | <b>Cellepora</b> Fabricius.           |             |       |       |       |        |
|       |                  |        | <i>depressa..... T. &amp; H.</i>      | P. F. S. C. | ..... | 14    | 4     | 9      |
| "     | $\frac{5467}{1}$ | "      | <i>radiata..... T. &amp; H.</i>       | " "         | ..... | 13    | 4     | 8      |
| "     | $\frac{5468}{1}$ | "      | <i>tessellata..... T. &amp; H.</i>    | " "         | ..... | 13    | 4     | 7      |
| "     | $\frac{5469}{1}$ | Fig'd. | <b>Discoporella</b> Gray.             |             |       |       |       |        |
|       |                  |        | <i>denticulata (Con.) T. &amp; H.</i> | " "         | ..... | 11    | 4     | 1-5    |
| "     | $\frac{5470}{1}$ | "      | <b>Heteropora</b> de Blainville.      |             |       |       |       |        |
|       |                  |        | <i>tortilis (Lons.).. T. &amp; H.</i> | " "         | ..... | 16    | 4     | 17, 18 |
| Mioc. | $\frac{5471}{1}$ | Type.  | <b>Lunilites</b> Lamarck.             |             |       |       |       |        |
|       |                  |        | <i>denticulata</i> .....              | .....       | ..... | ..... | ..... | .....  |
|       |                  |        | <b>Membranipora</b> de Blainv.        |             |       |       |       |        |
|       |                  |        | <i>lacinia..... T. &amp; H.</i>       | P. F. S. C. | ..... | 14    | 4     | 10     |
| "     | $\frac{5472}{1}$ | Fig'd. | <b>Reptocelleporaria</b> d'Orb.       |             |       |       |       |        |
|       |                  |        | <i>informata (Lons.) T. &amp; H.</i>  | " "         | ..... | 15    | 4     | 11, 12 |
| "     | $\frac{5473}{1}$ | "      | <i>similis (Lons.).. T. &amp; H.</i>  | " "         | ..... | 16    | 4     | 13, 14 |



## CŒLEENTERATA.

## Class ACTINOZOA.

| LOCALITY.               | REMARKS.                                                           |
|-------------------------|--------------------------------------------------------------------|
| .....                   | See <i>Astrangia bella</i> .                                       |
| Darlington Dist., S. C. | As <i>Astræa bella</i> . A small colony on a fragment of a pecten. |

## Class ECHINOIDEA.

|                                  |                       |
|----------------------------------|-----------------------|
| James River, Va.                 | Practically entire.   |
| The Grove, Cooper River, S. C.   | An entire individual. |
| Goose Creek, Cooper River, S. C. | Entire individual.    |

## Class POLYZOA.

|                                        |                                                                                                                                                                       |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Smith's,<br>Goose Creek, S. C.         | A small colony on a fragment of <i>Encope macrophora</i> with the types of <i>Cellepora radiata</i> and <i>Membranipora lacinia</i> , figs. 8 and 10, same plate.     |
| Smith's,<br>Goose Creek, S. C.         | A small colony on a fragment of an <i>Encope macrophora</i> with the types of <i>Cellepora depressa</i> and <i>Membranipora lacinia</i> , figs. 9 and 10, same plate. |
| Giles's Bluff,<br>Pee Dee River, S. C. | A small colony on a bit of shell.                                                                                                                                     |
| Darlington Dist., S. C.                | As <i>Lunulites denticulata</i> . Two small colonies referred to these figures.                                                                                       |
| Virginia.                              | A branching fragment.                                                                                                                                                 |
| .....                                  | See <i>Discoporella denticulata</i> .                                                                                                                                 |
| Smith's,<br>Goose Creek, S. C.         | A small colony on a fragment of <i>Encope macrophora</i> bearing the types of <i>Cellepora depressa</i> and <i>Cellepora radiata</i> , figs. 8 and 9, same plate.     |
| Darlington Dist., S. C.                | A small botryoidal mass.                                                                                                                                              |
| “ “                                    | A reniform mass.                                                                                                                                                      |

Class BRACHIOPODA.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.         | REFERENCE.  |       |       |       |        |
|---------------|------------------|-------------------|------------------------------------|-------------|-------|-------|-------|--------|
|               |                  |                   |                                    | Work.       | Vol.  | P.    | Pl.   | Figs.  |
| Mioc.         | $\frac{5474}{1}$ | Fig'd.            | <b>Discina</b> Lamarck.            |             |       |       |       |        |
|               |                  |                   | <i>lugubris</i> .....              | .....       | ..... | ..... | ..... | .....  |
|               |                  |                   | <b>Discinisca</b> Dall.            |             |       |       |       |        |
|               |                  |                   | <i>lugubris</i> (Con.) .. T. & H.  | P. F. S. C. | ..... | 17    | 5     | I      |
| "             | $\frac{5474}{2}$ | "                 | " " Whitf.                         | Mon. G. S.  | 24    | 23    | I     | I-3, 7 |
| "             | $\frac{5475}{1}$ | "                 | <i>multilineata</i> (Con.) T. & H. | P. F. S. C. | ..... | 18    | 5     | 2      |
|               |                  |                   | <b>Orbicula</b> Cuvier.            |             |       |       |       |        |
|               |                  |                   | <i>lugubris</i> .....              | .....       | ..... | ..... | ..... | .....  |
|               |                  |                   | <i>multilineata</i> .....          | .....       | ..... | ..... | ..... | .....  |

Subkingdom MOLLUSCA.

|        |                  |        |                                   |             |       |       |         |              |
|--------|------------------|--------|-----------------------------------|-------------|-------|-------|---------|--------------|
| Mioc.  | $\frac{5476}{1}$ | Fig'd. | <b>Amussium</b> Klein.            |             |       |       |         |              |
|        |                  |        | <i>Mortoni</i> (Rav.) T. & H.     | P. F. S. C. | ..... | 27    | 9<br>10 | I, 2<br>I, 2 |
| Plioc. | $\frac{5477}{1}$ | "      | <b>Anomia</b> (Linn) Müller.      |             |       |       |         |              |
|        |                  |        | <i>ephippium</i> T. & H.          |             |       |       |         |              |
|        |                  |        | (non Linn.)                       | .....       | ..... | ..... | .....   | .....        |
|        |                  |        | <i>simplex</i> (d'Orb.) T. & H.   | P. F. S. C. | ..... | 18    | 5       | 4, 5         |
| Mioc.  | $\frac{5478}{1}$ | Type.  | <b>Arca</b> (Linn.) Lamarck.      |             |       |       |         |              |
|        |                  |        | <i>centenaria</i> .....           | .....       | ..... | ..... | .....   | .....        |
|        |                  |        | <i>hians</i> T. & H. (non Brown)  | .....       | ..... | ..... | .....   | .....        |
|        |                  |        | <i>lienosa</i> .....              | .....       | ..... | ..... | .....   | .....        |
|        |                  |        | <i>scalaris</i> .....             | .....       | ..... | ..... | .....   | .....        |
| Eoc.   | $\frac{5479}{1}$ | "      | <b>Asaphis</b> Modeer.            |             |       |       |         |              |
|        |                  |        | <i>centenaria</i> (Con.) T. & H.  | P. F. S. C. | ..... | 91    | 22      | 8            |
| Plioc. | $\frac{5480}{1}$ | "      | <b>Astarte</b> Sowerby.           |             |       |       |         |              |
|        |                  |        | <i>castanella</i> .....           | Mon. G. S.  | 9     | 231   | 30      | I, 2         |
| Eoc.   | $\frac{5481}{1}$ | "      | "                                 | Pal. N. J.  | I     | 231   | 30      | I, 2         |
|        |                  |        | <i>concentrica</i> (Con.) T. & H. | P. F. S. C. | ..... | 71    | 20      | 3            |
| Eoc.   | $\frac{5481}{1}$ | "      | <i>planimarginata</i> ... Whitf.  | Mon. G. S.  | 9     | 232   | 30      | 3, 4         |
|        |                  |        | "                                 | Pal. N. J.  | I     | 232   | 30      | 3, 4         |
| Eoc.   | $\frac{5482}{1}$ | Type.  | <b>Cardita</b> Bruguière.         |             |       |       |         |              |
|        |                  |        | <i>arata</i> .....                | .....       | ..... | ..... | .....   | .....        |
|        |                  |        | <i>Brittoni</i> .....             | Mon. G. S.  | 9     | 233   | 30      | 11, 12       |
|        |                  |        | "                                 | Pal. N. J.  | I     | 233   | 30      | 11, 12       |
| Mioc.  | $\frac{5483}{1}$ | Fig'd. | <i>granulata</i> .....            | .....       | ..... | ..... | .....   | .....        |
|        |                  |        | <b>Carditamera</b> Conrad.        |             |       |       |         |              |
| Eoc.   | $\frac{5484}{1}$ | Type.  | <i>arata</i> (Con.) .... T. & H.  | P. F. S. C. | ..... | 65    | 19      | 4, 5         |
|        |                  |        | <b>Caryatis</b> Römer.            |             |       |       |         |              |
| Plioc. | $\frac{5485}{1}$ | Fig'd. | <i>ovalis</i> .....               | Mon. G. S.  | 9     | 237   | 30      | 15, 16       |
|        |                  |        | "                                 | Pal. N. J.  | I     | 237   | 30      | 15, 16       |
| Plioc. | $\frac{5485}{1}$ | Fig'd. | <b>Chama</b> Linn.                |             |       |       |         |              |
|        |                  |        | <i>arcinella</i> .....            | .....       | ..... | ..... | .....   | .....        |
| Plioc. | $\frac{5485}{1}$ | Fig'd. | <i>congregata</i> (Con.) T. & H.  | P. F. S. C. | ..... | 23    | 7       | 7, 8         |
|        |                  |        |                                   |             |       |       |         |              |



| LOCALITY.                                                 | REMARKS.                                                                                                                                                |
|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                                                     | See <i>Discinisca lugubris</i> .                                                                                                                        |
| Davis's,<br>Pee Dee River, S. C.<br>Cumberland Co., N. J. | As <i>Orbicula lugubris</i> . The dorsal valve of a large individual, somewhat broken along the margin.<br>As <i>Discina lugubris</i> . A dorsal valve. |
| Davis's,<br>Pee Dee River, S. C.                          | As <i>Orbicula multilineata</i> . An imperfect upper valve referred to this figure. Probably a young <i>Discinisca lugubris</i> .                       |
| .....                                                     | See <i>Discinisca lugubris</i> .                                                                                                                        |
| .....                                                     | " " <i>multilineata</i> .                                                                                                                               |

Class LAMELLIBRANCHIATA.

|                                       |                                                                                                                                                    |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                                 | As <i>Pecten Mortoni</i> .                                                                                                                         |
| Smith's,<br>Goose Creek, S. C.        | " " " Two opposite valves of different individuals, and an imperfect specimen showing the conjoined valves of an individual.                       |
| .....                                 | See <i>Anomia simplex</i> .                                                                                                                        |
| Waccamaw, S. C.                       | As <i>Anomia ephippium</i> Linn. A single valve.                                                                                                   |
| .....                                 | See <i>Striarca centenaria</i> .                                                                                                                   |
| .....                                 | " <i>Granoarca propatula</i> .                                                                                                                     |
| .....                                 | " <i>Scapharca lienosa</i> .                                                                                                                       |
| .....                                 | " <i>Cunearca scalaris</i> .                                                                                                                       |
| Pee Dee River, S. C.                  | As type of <i>Psammocola pliocena</i> T. & H. A right valve. Very closely allied to <i>Asaphis deflorata</i> Linn. of the Bahamas and West Indies. |
| Shark River, N. J.<br>Waccamaw, S. C. | Internal casts of two opposite valves.<br>Two opposite valves, apparently of the same individual.                                                  |
| Shark River, N. J.                    | Internal casts of two left valves.                                                                                                                 |
| .....                                 | See <i>Carditamera arata</i> .                                                                                                                     |
| Shark River, N. J.                    | Cast of a pair of valves, slightly distorted.                                                                                                      |
| .....                                 | See <i>Venericardia granulata</i> .                                                                                                                |
| Darlington Dist., S. C.               | As <i>Cardita arata</i> . The separated valves of an individual.                                                                                   |
| Manisquam Riv., N. J.                 | Casts of two opposite valves.                                                                                                                      |
| .....                                 | See <i>Echinochama arcinella</i> .                                                                                                                 |
| Waccamaw, S. C.                       | An entire individual.                                                                                                                              |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                            | REFERENCE.  |       |       |       |                      |
|---------------|------------------|-------------------|-------------------------------------------------------|-------------|-------|-------|-------|----------------------|
|               |                  |                   |                                                       | Work.       | Vol.  | P.    | Pl.   | Figs.                |
|               |                  |                   | <b>Crassatella</b> Lamarck.                           |             |       |       |       |                      |
|               |                  |                   | <i>Gibbesi</i> .....                                  | .....       | ..... | ..... | ..... | .....                |
| Plioc.        | <u>5486</u><br>1 | Type.             | <b>Crassatellites</b> Krüger.                         |             |       |       |       |                      |
|               |                  |                   | <i>Gibbesi</i> ..... <i>T. &amp; H.</i>               | P. F. S. C. | ..... | 74    | 20    | 9, 10                |
| Mioc.         | <u>5487</u><br>1 | Fig'd.            | <b>Cunearca</b> Dall.....                             | .....       | ..... | ..... | ..... | .....                |
|               |                  |                   | <i>scalaris</i> ( <i>Con.</i> ).. <i>T. &amp; H.</i>  | P. F. S. C. | ..... | 43    | 16    | 1, 2 ( <i>pars</i> ) |
| Plioc.        | <u>5488</u><br>1 | Type.             | <b>Divaricella</b> von Martens.                       |             |       |       |       |                      |
|               |                  |                   | <i>Conradi</i> ..... <i>d'Orb.</i>                    | Pr. de Pal. | 3     | 117   | ..... | .....                |
|               |                  |                   | <i>T. &amp; H.</i>                                    | P. F. S. C. | ..... | 59    | 18    | 10, 11               |
| "             | <u>5489</u><br>1 | Fig'd.            | <b>Echinochama</b> Fischer.                           |             |       |       |       |                      |
|               |                  |                   | <i>arcinella</i> ( <i>Linn.</i> ) <i>T. &amp; H.</i>  | " "         | ..... | 22    | 7     | 4, 6                 |
| Mioc.         | <u>5490</u><br>1 | "                 | <b>Ensis</b> Schumacher.                              |             |       |       |       |                      |
|               |                  |                   | <i>directus</i> ( <i>Con.</i> ).. <i>T. &amp; H.</i>  | " "         | ..... | 101   | 24    | 3                    |
| "             | <u>5491</u><br>1 | Type.             | <b>Euvola</b> Dall.....                               | .....       | ..... | ..... | ..... | .....                |
|               |                  |                   | <i>Holmesi</i> ..... <i>Dall.</i>                     | T. W. I. S. | 3     | 721   | ..... | .....                |
|               |                  |                   | <i>T. &amp; H.</i>                                    | P. F. S. C. | ..... | 26    | 8     | 5, 6                 |
| "             | <u>5492</u><br>1 | Fig'd.            | <b>Glycymeris</b> Da Costa.                           |             |       |       |       |                      |
|               |                  |                   | <i>americana</i> ( <i>Deifr.</i> ) <i>T. &amp; H.</i> | " "         | ..... | 48    | 17    | 3                    |
| Plioc.        | <u>5492</u><br>2 | "                 | " " "                                                 | " "         | ..... | 49    | 17    | 4                    |
| Mioc.         | <u>5492</u><br>3 | "                 | " " "                                                 | " "         | ..... | 51    | 17    | 6c                   |
| Plioc.        | <u>5493</u><br>1 | Type.             | <i>lævis</i> ..... <i>T. &amp; H.</i>                 | " "         | ..... | 50    | 17    | 5                    |
| Mioc.         | <u>5494</u><br>1 | "                 | <i>subovata</i> <i>Say, var.</i>                      |             |       |       |       |                      |
|               |                  |                   | <i>Tuomeyi</i> <i>Dall.</i>                           | T. W. I. S. | 3     | 611   | ..... | .....                |
|               |                  |                   | <i>T. &amp; H.</i>                                    | P. F. S. C. | ..... | 47    | 17    | 1                    |
| "             | <u>5495</u><br>1 | "                 | <b>Granoarca</b> Conrad.                              |             |       |       |       |                      |
|               |                  |                   | <i>propatula</i> ( <i>Con.</i> ) <i>T. &amp; H.</i>   | " "         | ..... | 34    | 14    | 4, 5                 |
| "             | <u>5496</u><br>1 | Fig'd.            | <b>Hemimactra</b> Swainson.                           |             |       |       |       |                      |
|               |                  |                   | <i>duplinensis</i> ( <i>Dall</i> )                    |             |       |       |       |                      |
|               |                  |                   | <i>T. &amp; H.</i>                                    | " "         | ..... | 97    | 23    | 8                    |
|               |                  |                   | <i>Janira</i> Schumacher.....                         | .....       | ..... | ..... | ..... | .....                |
|               |                  |                   | <i>affinis</i> <i>T. &amp; H.</i>                     |             |       |       |       |                      |
|               |                  |                   | (non <i>Risso</i> vel <i>Reuss</i> ).                 | .....       | ..... | ..... | ..... | .....                |
|               |                  |                   | <i>hemicyclica</i> .....                              | .....       | ..... | ..... | ..... | .....                |
| Mioc.         | <u>5497</u><br>1 | Fig'd.            | <b>Leda</b> Schumacher.                               |             |       |       |       |                      |
|               |                  |                   | <i>acuta</i> <i>Con.</i> ..... <i>T. &amp; H.</i>     | P. F. S. C. | ..... | 53    | 17    | 10-12                |
|               |                  |                   | <b>Lucina</b> Bruguière.                              |             |       |       |       |                      |
|               |                  |                   | <i>Conradi</i> .....                                  | .....       | ..... | ..... | ..... | .....                |
|               |                  |                   | <i>divaricata</i> <i>T. &amp; H.</i>                  |             |       |       |       |                      |
|               |                  |                   | (non <i>Linn.</i> ) .....                             | .....       | ..... | ..... | ..... | .....                |
| Mioc.         | <u>5498</u><br>1 | Fig'd.            | <b>Lyropecten</b> Conrad.....                         | .....       | ..... | ..... | ..... | .....                |
|               |                  |                   | <i>Jeffersonius, var.</i>                             |             |       |       |       |                      |
|               |                  |                   | <i>septenarius</i> ( <i>Say</i> ) <i>T. &amp; H.</i>  | P. F. S. C. | ..... | 31    | 13    | 1-4                  |



| LOCALITY.                                     | REMARKS.                                                                                                                                                                             |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                                         | See <i>Crassatellites Gibbesi</i> .                                                                                                                                                  |
| Waccamaw, S. C.                               | As <i>Crassatella Gibbesi</i> . A large individual and a small left valve.                                                                                                           |
| .....                                         | Defined as a subgenus of <i>Scapharca</i> .                                                                                                                                          |
| Darlington Dist., S. C.                       | As <i>Arca scalaris</i> . A left valve.                                                                                                                                              |
| .....                                         | As <i>Lucina Conradi</i> .                                                                                                                                                           |
| Waccamaw, S. C.                               | “ “ <i>divaricata</i> Linn. Two opposite valves.                                                                                                                                     |
| Royal Landing,<br>Waccamaw, S. C.             | As <i>Chama arcinella</i> . An entire individual.                                                                                                                                    |
| Smith's,<br>Goose Creek, S. C.                | As <i>Solen ensis</i> Linn. A left valve. May have come from Pee Dee.                                                                                                                |
| .....                                         | Defined as a section of <i>Pecten</i> .                                                                                                                                              |
| Smith's,<br>Goose Creek, S. C.                | As type of <i>Janira affinis</i> . A single right valve. Tuomey & Holmes's name was found by Dall to have been preoccupied.                                                          |
| Sumter Dist., S. C.                           | As <i>Pectunculus passus</i> Con. The separated valves of an individual.                                                                                                             |
| Waccamaw, S. C.                               | As <i>Pectunculus quinquerrugatus</i> Con. Two opposite valves from different individuals.                                                                                           |
| Goose Creek, S. C.                            | As type of <i>Pectunculus transversus</i> . Internal cast of a small valve.                                                                                                          |
| Waccamaw, S. C.                               | A right valve, the rear portion of which has been lost.                                                                                                                              |
| Darlington, S. C.                             | As <i>Pectunculus subovatus</i> Say. The two separated valves of an individual.                                                                                                      |
| Sumter Dist., S. C.                           | As type of <i>Arca hians</i> . Two individuals, one of which preserves its filling of marl.                                                                                          |
| Black River or Smith's,<br>Goose Creek, S. C. | As <i>Mactra similis</i> Say. An entire individual.                                                                                                                                  |
| .....                                         | Synonym of <i>Pecten</i> .                                                                                                                                                           |
| .....                                         | See <i>Euvola Holmesii</i> .                                                                                                                                                         |
| .....                                         | See <i>Pecten hemicyclicus</i> .                                                                                                                                                     |
| Darlington Dist., S. C.                       | As <i>Nucula acuta</i> . A left valve.                                                                                                                                               |
| .....                                         | See <i>Divaricella Conradi</i> .                                                                                                                                                     |
| .....                                         | “ “ “                                                                                                                                                                                |
| .....                                         | Considered by Dall to be a section of <i>Pecten</i> .                                                                                                                                |
| Near Giles's Bluff,<br>Pee Dee River, S. C.   | As <i>Pecten septenarius</i> . A very perfect right valve, the ears of which have been broken a little since the figures were made, unless those parts were restored in the figures. |

## Class LAMELLIBRANCHIATA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                       | REFERENCE.  |      |     |     |        |
|------------------|------------------|----------------------|--------------------------------------------------|-------------|------|-----|-----|--------|
|                  |                  |                      |                                                  | Work.       | Vol. | P.  | Pl. | Figs.  |
|                  |                  |                      | <b>Mactra</b> Linn.                              |             |      |     |     |        |
|                  |                  |                      | <i>oblongata</i> .....                           |             |      |     |     |        |
|                  |                  |                      | <i>similis</i> T. & H. (non Say).                |             |      |     |     |        |
|                  |                  |                      | <b>Mactrotoma</b> Dall.....                      |             |      |     |     |        |
| Mioc.            | $\frac{5499}{1}$ | Fig'd.               | <i>fragilis</i> ( <i>Gmelin</i> ) T. & H.        | P. F. S. C. |      | 96  | 23  | 7      |
|                  |                  |                      | <b>Margaritaria</b> Conrad.                      |             |      |     |     |        |
| "                | $\frac{5500}{1}$ | Fig'd.               | <i>abrupta</i> ( <i>Con.</i> )... T. & H.        | " "         |      | 101 | 24  | 2      |
|                  |                  |                      | <b>Modiolus</b> Lamarck.                         |             |      |     |     |        |
| "                | $\frac{5501}{1}$ | Type.                | <i>inflatus</i> ..... T. & H.                    | P. F. S. C. |      | 33  | 14  | 3      |
|                  |                  |                      | <b>Mytilus</b> Linn.                             |             |      |     |     |        |
| "                | $\frac{5502}{1}$ | "                    | <i>Conradianus</i> ( <i>d'Orb.</i> )<br>T. & H.  | " "         |      | 32  | 14  | 1, 2   |
|                  |                  |                      | <i>incrassatus</i> Con.<br>(non Deshayes).       |             |      |     |     |        |
|                  |                  |                      | <i>inflatus</i> .....                            |             |      |     |     |        |
|                  |                  |                      | <b>Neæra</b> Gray                                |             |      |     |     |        |
| Eoc.             | $\frac{5503}{1}$ | Type.                | <i>æquivalvis</i> ..... Whitf.                   | Mon. G. S.  | 9    | 240 | 30  | 20, 21 |
|                  |                  |                      | "                                                | Pal. N. J.  | 1    | 240 | 30  | 20, 21 |
|                  |                  |                      | <b>Nodipecten</b> Dall.....                      |             |      |     |     |        |
| Mioc.            | $\frac{5504}{1}$ | "                    | ? <i>peedeensis</i> .... T. & H.                 | P. F. S. C. |      | 30  | 12  | 1-5    |
|                  |                  |                      | <b>Nucula</b> Lamarck.                           |             |      |     |     |        |
|                  |                  |                      | <i>acuta</i> .....                               |             |      |     |     |        |
| Mioc.            | $\frac{5505}{1}$ | Fig'd.               | <i>proxima</i> ( <i>Say</i> ) T. & H.            | P. F. S. C. |      | 53  | 17  | 7-9    |
|                  |                  |                      | <b>Nuculana</b> Link.                            |             |      |     |     |        |
| Eoc.             | $\frac{5506}{1}$ | "                    | <i>albaria</i> ( <i>Con.</i> ).... Whitf.        | Mon. G. S.  | 9    | 228 | 29  | 15, 16 |
|                  |                  |                      | "                                                | Pal. N. J.  | 1    | 228 | 29  | 15, 16 |
|                  |                  |                      | <b>Ostrea</b> Linn.                              |             |      |     |     |        |
| Mioc.            | $\frac{5507}{1}$ | "                    | <i>compressirostra</i> ( <i>Say</i> )<br>T. & H. | P. F. S. C. |      | 21  | 6   | 1-3    |
|                  |                  |                      | <i>Raveneliana</i> .....                         |             |      |     |     |        |
|                  |                  |                      | <i>virginiana</i> .....                          |             |      |     |     |        |
| Plioc.           | $\frac{5508}{1}$ | Fig'd.               | <i>virginica</i> ( <i>Gmelin</i> ) T. & H.       | P. F. S. C. |      | 20  | 5   | 6-9    |
|                  |                  |                      | <b>Pecten</b> Müller.                            |             |      |     |     |        |
|                  |                  |                      | <i>eboreus</i> .....                             |             |      |     |     |        |
| Mioc.            | $\frac{5509}{1}$ | Fig'd.               | <i>hemicyclicus</i> ( <i>Rav.</i> )<br>T. & H.   | P. F. S. C. |      | 25  | 8   | 1-4    |
|                  |                  |                      | <i>Mortoni</i> .....                             |             |      |     |     |        |
|                  |                  |                      | <i>peedeensis</i> .....                          |             |      |     |     |        |
| Eoc.             | $\frac{5510}{1}$ | Type.                | <i>Rigbyi</i> ..... Whitf.                       | Mon. G. S.  | 9    | 226 | 29  | 6      |
|                  |                  |                      | "                                                | Pal. N. J.  | 1    | 226 | 29  | 6      |
|                  |                  |                      | <i>septenarius</i> .....                         |             |      |     |     |        |
|                  |                  |                      | <b>Pectunculus</b> Lamarck.....                  |             |      |     |     |        |
|                  |                  |                      | <i>lævis</i> .....                               |             |      |     |     |        |
|                  |                  |                      | <i>passus</i> .....                              |             |      |     |     |        |
|                  |                  |                      | <i>quinqerugatus</i> .....                       |             |      |     |     |        |



| LOCALITY.                              | REMARKS.                                                                                                               |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| .....                                  | See <i>Mactrotoma fragilis</i> .                                                                                       |
| .....                                  | See <i>Hemimactra duplinensis</i> .                                                                                    |
| .....                                  | Defined as a subgenus of <i>Mactra</i> .                                                                               |
| Pee Dee, S. C.                         | As <i>Mactra oblongata</i> Say. A large, entire individual.                                                            |
| Smith's,<br>Goose Creek, S. C.         | As <i>Pholadomya abrupta</i> . Individual preserving right valve and middle portion of the left.                       |
| Giles's Bluff,<br>Pee Dee River, S. C. | As <i>Mytilus inflatus</i> . An imperfect left valve, imbedded.                                                        |
| Darlington Dist., S.C.                 | As <i>Mytilus incrassatus</i> Con. An imperfect left valve.                                                            |
| .....                                  | See <i>Mytilus Conradianus</i> .                                                                                       |
| .....                                  | See <i>Modiolus inflatus</i> .                                                                                         |
| Shark River, N. J.                     | Nearly entire cast of a single valve, imbedded, and of a larger, less perfect individual.                              |
| .....                                  | Defined as a section of <i>Pecten</i> .                                                                                |
| Darlington Dist., S. C.                | As <i>Pecten peedeensis</i> . A pair of conjoined valves.                                                              |
| .....                                  | See <i>Leda acuta</i> .                                                                                                |
| Darlington Dist., S. C.                | Two opposite, fragmentary valves.                                                                                      |
| Shark River, N. J.                     | Sharp internal casts of two opposite valves.                                                                           |
| Smith's,<br>Goose Creek, S. C.         | As type of <i>Ostrea Raveneliana</i> . An individual which has lost half of the lower valve.                           |
| .....                                  | See <i>Ostrea compressirostra</i> .                                                                                    |
| .....                                  | See <i>Ostrea virginica</i> .                                                                                          |
| Waccamaw, S. C.                        | As <i>Ostrea virginiana</i> Lister. Three valves belonging to different individuals and an entire individual (fig. 9). |
| .....                                  | See <i>Plagiectenium eboreum</i> .                                                                                     |
| The Grove,<br>Cooper River, S. C.      | As <i>Janira hemicyclica</i> . The individual which was referred to these figures by Prof. Holmes.                     |
| .....                                  | See <i>Amussium Mortoni</i> .                                                                                          |
| .....                                  | " <i>Nodipecten ? peedeensis</i> .                                                                                     |
| Farmingdale, N. J.                     | Very sharp external imprint of a right valve.                                                                          |
| .....                                  | See <i>Lyropecten Jeffersonius</i> , var. <i>septenarius</i> .                                                         |
| .....                                  | Synonym of <i>Glycymeris</i> .                                                                                         |
| .....                                  | See <i>Glycymeris laevis</i> .                                                                                         |
| .....                                  | " " <i>americana</i> .                                                                                                 |
| .....                                  | " " "                                                                                                                  |

Class LAMELLIBRANCHIATA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                               | REFERENCE.               |        |            |          |                    |
|------------------|------------------|----------------------|------------------------------------------------------------------------------------------|--------------------------|--------|------------|----------|--------------------|
|                  |                  |                      |                                                                                          | Work.                    | Vol.   | P.         | Pl.      | Figs.              |
|                  |                  |                      | <i>Pectunculus</i> Lamarck—Cont.<br><i>subovatus</i> T. & H.<br>(non Say).               | .....                    | .....  | .....      | .....    | .....              |
|                  |                  |                      | <i>transversus</i> T. & H.<br>(non Deshayes)                                             | .....                    | .....  | .....      | .....    | .....              |
|                  |                  |                      | <b>Pholadomya</b> Sowerby.<br><i>abrupta</i> .....                                       | .....                    | .....  | .....      | .....    | .....              |
|                  |                  |                      | <b>Pholas</b> Linn.<br><i>Memmingeri</i> .....<br><i>oblongata</i> T. & H.<br>(non Say). | .....                    | .....  | .....      | .....    | .....              |
| Mioc.            | $\frac{5511}{1}$ | Type.                | <b>Placunanomia</b> Broderip.<br><i>plicata</i> ..... T. & H.                            | P. F. S. C.              | .....  | 19         | 6        | 4-6                |
| Plioc.           | $\frac{5512}{1}$ | Fig'd.               | <b>Plagiectenium</b> Dall.....<br><i>eboreum</i> (Con.) T. & H.                          | P. F. S. C.              | .....  | 28         | 11       | 1-5                |
| Mioc.            | $\frac{5513}{1}$ | "                    | <b>Plicatula</b> Lamarck.<br><i>marginata</i> (Say) T. & H.                              | " "                      | .....  | 24         | 7        | 11-14              |
| Eoc.             | $\frac{5514}{1}$ | "                    | <b>Protocardia</b> Beyrich.<br><i>curta</i> (Con.)..... Whitf.                           | Mon. G. S.<br>Pal. N. J. | 9<br>1 | 236<br>236 | 30<br>30 | 5-7<br>5-7         |
|                  |                  |                      | <b>Psammocola</b> de Blainville.<br><i>pliocena</i> .....                                | .....                    | .....  | .....      | .....    | .....              |
| Mioc.            | $\frac{5515}{1}$ | Fig'd.               | <b>Scapharca</b> Gray.....<br><i>lienosa</i> (Say)... T. & H.                            | P. F. S. C.              | .....  | 40         | 15       | 2, 3               |
|                  |                  |                      | <b>Solen</b> Linn.<br><i>ensis</i> T. & H. (non Linn.)                                   | .....                    | .....  | .....      | .....    | .....              |
| Mioc.            | $\frac{5516}{1}$ | Fig'd.               | <b>Striarca</b> Conrad.....<br><i>centenaria</i> (Say) T. & H.                           | P. F. S. C.              | .....  | 37         | 14       | 11, 12             |
| "                | $\frac{5517}{1}$ | "                    | <b>Strigilla</b> Turton.<br><i>flexuosa</i> (Say).. T. & H.                              | " "                      | .....  | 90         | 22       | 7-7b               |
|                  |                  |                      | <b>Tellina</b> Linn.<br><i>flexuosa</i> .....                                            | .....                    | .....  | .....      | .....    | .....              |
| Mioc.            | $\frac{5518}{1}$ | Type.                | <b>Thovana</b> Gray.....<br><i>Memmingeri</i> ... T. & H.                                | P. F. S. C.              | .....  | 104        | 24       | 6                  |
| " ?              | $\frac{5519}{1}$ | Fig'd.               | <i>producta</i> (Con.) T. & H.                                                           | " "                      | .....  | 103        | 24       | 5                  |
| Plioc.           | $\frac{5520}{1}$ | "                    | <b>Venericardia</b> Lamarck.<br><i>granulata</i> (Say) T. & H.                           | " "                      | .....  | 66         | 19       | 6                  |
| Mioc.            | $\frac{5521}{1}$ | "                    | <b>Venus</b> Linn.<br><i>concentrica</i> (Gmelin)<br>T. & H.                             | " "                      | .....  | 82         | 21       | 7                  |
| Plioc.           | $\frac{5522}{1}$ | "                    | <i>latilirata</i> (Con.) T. & H.                                                         | " "                      | .....  | 85         | 21       | 12 ( <i>pars</i> ) |
| Mioc.            | $\frac{5523}{1}$ | "                    | <i>tridacnoides</i> (Lamarck)<br>T. & H.                                                 | " "                      | .....  | 85         | 22       | 1                  |



| LOCALITY.                      | REMARKS.                                                                                                                                                                     |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                          | See <i>Glycymeris subovata</i> , var. <i>Tuomeyi</i> .                                                                                                                       |
| .....                          | “ “ <i>americana</i> .                                                                                                                                                       |
| .....                          | “ <i>Margaritaria abrupta</i> .                                                                                                                                              |
| .....                          | “ <i>Thovana Memmingeri</i> .                                                                                                                                                |
| .....                          | “ “ <i>producta</i> .                                                                                                                                                        |
| Smith's,<br>Goose Creek, S. C. | An individual, the beak of which has been broken so as so show the cardinal teeth. The muscular impression in figure 5 seems to have been supplied from some other specimen. |
| .....                          | Defined as a section of <i>Pecten</i> .                                                                                                                                      |
| Waccamaw, S. C.                | As <i>Pecten eboreus</i> . Both valves of an individual, one of which has lost its posterior ear.                                                                            |
| Darlington Dist., S. C.        | An entire individual with separable valves.                                                                                                                                  |
| Farmingdale, N. J.             | Cast of a right valve and of a pair of partly expanded valves.                                                                                                               |
| .....                          | See <i>Asaphis centenaria</i> .                                                                                                                                              |
| .....                          | Subgenus under <i>Arca</i> .                                                                                                                                                 |
| Waccamaw, S. C.                | As <i>Arca lienosa</i> . Both valves of an individual. From Tilley's landing.                                                                                                |
| .....                          | See <i>Ensis directus</i> .                                                                                                                                                  |
| .....                          | Section of <i>Barbatia</i> , a subgenus under <i>Arca</i> .                                                                                                                  |
| Sumter Dist., S. C.            | As <i>Arca centenaria</i> . Two opposite valves from different individuals.                                                                                                  |
| Pee Dee, S. C.                 | As <i>Tellina flexuosa</i> . Two opposite valves of different sizes.                                                                                                         |
| .....                          | See <i>Strigilla flexuosa</i> .                                                                                                                                              |
| .....                          | Subgenus under <i>Pholas</i> .                                                                                                                                               |
| Sumter Dist., S. C.            | As <i>Pholas Memmingeri</i> . A somewhat fractured left valve.                                                                                                               |
| Pee Dee, S. C.                 | As <i>Pholas oblongata</i> Say. A left valve. May have come from Waccamaw or Sumter, S. C.                                                                                   |
| Waccamaw, S. C.                | As <i>Cardita granulata</i> . Two opposite valves.                                                                                                                           |
| Sumter Dist., S. C.            | An individual which has lost a portion of the left valve.                                                                                                                    |
| Waccamaw, S. C.                | A right valve.                                                                                                                                                               |
| Darlington Dist., S. C.        | A weathered right valve.                                                                                                                                                     |

Class GASTROPODA.

| Geol.<br>Subdiv | Cat.<br>No.      | Type or<br>Fig'd Sp.  | GENUS, SPECIES AND AUTHOR.                                                          | REFERENCE.  |       |       |       |         |
|-----------------|------------------|-----------------------|-------------------------------------------------------------------------------------|-------------|-------|-------|-------|---------|
|                 |                  |                       |                                                                                     | Work.       | Vol.  | P.    | Pl.   | Figs.   |
| Eoc.            | <u>5524</u><br>1 | Type.                 | <b>Actæon</b> Montfort.<br>bicinctus..... <i>Heilprin</i> .                         | P. A. N. S. | 30    | 212   | 13    | 6       |
|                 |                  |                       | <b>Apollon</b> Montfort.<br><i>caudata</i> .....                                    | .....       | ..... | ..... | ..... | .....   |
|                 |                  |                       | <b>Architectonica</b> Bolten.....<br><i>annosa</i> .....                            | .....       | ..... | ..... | ..... | .....   |
| Mioc.           | <u>5525</u><br>1 | Fig'd.                | <b>Aurinia</b> H. & A. Adams...<br>mutabilis ( <i>Con.</i> ) <i>T. &amp; H.</i>     | P. F. S. C. | ..... | 128   | 27    | 5       |
|                 |                  |                       | obtusa ( <i>Emmons</i> ) <i>T. &amp; H.</i>                                         | " "         | ..... | 128   | 27    | 6       |
| "               | <u>5527</u><br>1 | Gen. and<br>Sp. Type. | <b>Buccinofusus</b> Conrad.<br>parilis..... <i>Conrad</i> .                         | F. S. T. F. | ..... | 18    | 4     | 2       |
|                 |                  |                       | "                                                                                   | Med. Tert.  | ..... | 85    | 49    | 5       |
|                 |                  |                       | "                                                                                   | Am. J. C.   | 3     | 264   | ...   | .....   |
| "               |                  |                       | <b>Buccinum</b> Linn.<br><i>vibex</i> .....                                         | .....       | ..... | ..... | ..... | .....   |
|                 |                  |                       | <i>Busycon</i> Bolten.....<br><i>canaliculatum</i> .....                            | .....       | ..... | ..... | ..... | .....   |
|                 |                  |                       | <i>carica</i> .....                                                                 | .....       | ..... | ..... | ..... | .....   |
| Eoc.            | <u>5528</u><br>1 | Fig'd.                | <b>Calyptrophorus</b> Conrad.<br>velatus ( <i>Con.</i> ).... <i>Whitf.</i>          | Mon. G. S.  | 18    | 222   | 33    | 26, 27  |
|                 |                  |                       | "                                                                                   | Pal. N. J.  | 2     | 222   | 33    | 26, 27  |
| Mioc            | <u>5529</u><br>1 | "                     | <b>Cancellaria</b> Lamarck.<br>reticulata ( <i>Linn.</i> ) <i>T. &amp; H.</i>       | P. F. S. C. | ..... | 142   | 28    | 16      |
| Eoc.            | <u>5530</u><br>1 | "                     | <b>Caricella</b> Conrad.<br>pyruloides ( <i>Con.</i> ) <i>Whitf.</i>                | Mon. G. S.  | 18    | 205   | 29    | 1, 2, 5 |
|                 |                  |                       | "                                                                                   | Pal. N. J.  | 2     | 205   | 29    | 1, 2, 5 |
| "               | <u>5530</u><br>2 | "                     | " " "                                                                               | Mon. G. S.  | 18    | 205   | 29    | 6       |
|                 |                  |                       | " " "                                                                               | Pal. N. J.  | 2     | 205   | 29    | 6       |
| "               | <u>5531</u><br>1 | "                     | <b>Cassidaria</b> Lamarck.<br>carinata ( <i>Lam.</i> )? <i>Whitf.</i>               | Mon. G. S.  | 18    | 224   | 34    | 19, 20  |
|                 |                  |                       | "                                                                                   | Pal. N. J.  | 2     | 224   | 34    | 19, 20  |
| "               | <u>5532</u><br>1 | Type.                 | <b>Columbella</b> Lamarck.<br>turricula..... <i>Whitf.</i>                          | Am. J. C.   | 1     | 261   | 27    | 1       |
|                 |                  |                       | <i>Colus</i> Humphrey.....<br><i>quadricostata</i> .....                            | .....       | ..... | ..... | ..... | .....   |
| Mioc.           | <u>5533</u><br>1 | Fig'd.                | <b>Conus</b> Linn.<br>adversarius ( <i>Con.</i> ) <i>T. &amp; H.</i>                | P. F. S. C. | ..... | 131   | 27    | 14      |
|                 |                  |                       | pulcherrimus... <i>Heilprin</i> .                                                   | P. A. N. S. | 30    | 213   | 13    | 8       |
| Mioc.           | <u>5534</u><br>1 | Fig'd.                | <b>Crepidula</b> Lamarck.<br><i>aculeata</i> <i>Gmelin</i> , var.                   | P. F. S. C. | ..... | 111   | 25    | 10      |
|                 |                  |                       | <i>costata</i> ( <i>Mort.</i> ) <i>T. &amp; H.</i>                                  |             |       |       |       |         |
| "               |                  |                       | <i>Crypta</i> Humphrey.....<br><i>spinosa</i> <i>T. &amp; H.</i> (non <i>Con.</i> ) | .....       | ..... | ..... | ..... | .....   |
|                 |                  |                       |                                                                                     | .....       | ..... | ..... | ..... | .....   |
| Mioc.           | <u>5535</u><br>1 | Fig'd.                | <b>Cypræa</b> Linn.<br>carolinensis ( <i>Con.</i> ) <i>T. &amp; H.</i>              | P. F. S. C. | ..... | 126   | 27    | 1, 2    |



| LOCALITY.                        | REMARKS.                                                                         |
|----------------------------------|----------------------------------------------------------------------------------|
| Claiborne, Ala.                  | As <i>Tornatella bicincta</i> . The individual described.                        |
| .....                            | See <i>Eupleura caudata</i> .                                                    |
| .....                            | Synonym of <i>Solarium</i> .                                                     |
| .....                            | See <i>Solarium annosum</i> .                                                    |
| .....                            | Subgenus of <i>Scaphella</i> .                                                   |
| Pee Dee, S. C.                   | As <i>Voluta mutabilis</i> . A small individual.                                 |
| “ “                              | “ “ “ var. An individual of average size.                                        |
| .....                            | As <i>Fusus parilis</i> .                                                        |
| .....                            | “ “ “                                                                            |
| St. Mary's River, Md.            | An individual which has lost part of the lip.                                    |
| .....                            | See <i>Nassa vibex</i> .                                                         |
| .....                            | Synonym of <i>Fulgur</i> .                                                       |
| .....                            | See <i>Fulgur Canaliculatum</i> .                                                |
| .....                            | “ “ <i>carica</i> .                                                              |
| Claiborne, Ala.                  | Nearly entire.                                                                   |
| Pee Dee, S. C.                   | A small individual.                                                              |
| Shark River, N. J.               | Two compressed internal casts.                                                   |
| Claiborne, Ala.                  | Individual with edge of lip somewhat imperfect.                                  |
| Shark River, N. J.               | A cast.                                                                          |
| Claiborne, Ala.                  | An individual of average size.                                                   |
| .....                            | Synonym of <i>Fusus</i> .                                                        |
| .....                            | See <i>Ecphora quadricostata</i> .                                               |
| Pee Dee, S. G.                   | A rather small individual.                                                       |
| Claiborne, Ala.                  | Individual, imperfect at lower extremity.                                        |
| Pee Dee, S. C.                   | As <i>Crypta spinosa</i> Con. A large individual which has lost much of its lip. |
| .....                            | Synonym of <i>Crepidula</i> .                                                    |
| .....                            | See <i>Crepidula aculeata</i> , var. <i>costata</i> .                            |
| Pee Dee or<br>Goose Creek, S. C. | Entire individual.                                                               |

## Class GASTROPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                                         | REFERENCE.               |         |            |          |                  |
|------------------|------------------|----------------------|----------------------------------------------------------------------------------------------------|--------------------------|---------|------------|----------|------------------|
|                  |                  |                      |                                                                                                    | Work.                    | Vol.    | P.         | Pl.      | Figs.            |
| Eoc.             | $\frac{5536}{1}$ | Fig'd.               | <b>Delphinula</b> Lamarck.<br><i>elegans</i> (Lea)... <i>Heilprin</i> .<br><i>solaroides</i> ..... | P. A. N. S.              | 30      | 211        | 13       | 2                |
| Mioc.            | $\frac{5537}{1}$ | Fig'd.               | <b>Drillia</b> Gray.<br><i>lunata</i> (H.C. Lea) T. & H.                                           | P. F. S. C.              | .....   | 132        | 27       | 16               |
| "                | $\frac{5538}{1}$ | "                    | <b>Ecphora</b> Conrad.<br><i>quadricostata</i> (Say)<br>T. & H.                                    | " "                      | .....   | 149        | 30       | 4                |
| "                | $\frac{5539}{1}$ | "                    | <b>Eupleura</b> H. & A. Adams.<br><i>caudata</i> (Say)... T. & H.                                  | " "                      | .....   | 142        | 28       | 15               |
| Eoc.             | $\frac{5540}{1}$ | Type.                | <b>Fasciolaria</b> Lamarck.<br><i>hercules</i> ..... <i>Whitf.</i><br>"                            | Mon. G. S.<br>Pal. N. J. | 18<br>2 | 202<br>202 | 26<br>26 | 10, 11<br>10, 11 |
| "                | ....             | "                    | " .....                                                                                            | Mon. G. S.<br>Pal. N. J. | 18<br>2 | 202<br>202 | 27<br>27 | 1, 2<br>1, 2     |
| "                | $\frac{5541}{1}$ | "                    | <i>propinqua</i> ..... <i>Whitf.</i><br>"                                                          | Mon. G. S.<br>Pal. N. J. | 18<br>2 | 203<br>203 | 27<br>27 | 3<br>3           |
| "                | $\frac{5542}{1}$ | "                    | <i>Samsoni</i> ..... <i>Whitf.</i><br>"                                                            | Mon. G. S.<br>Pal. N. J. | 18<br>2 | 204<br>204 | 27<br>27 | 4<br>4           |
| Plioc.           | $\frac{5543}{1}$ | Fig'd.               | <b>Fulgur</b> Montfort.<br><i>canaliculatum</i> (L.) T. & H.                                       | P. F. S. C.              | .....   | 146        | 29       | 2                |
| "                | $\frac{5544}{1}$ | "                    | <i>carica</i> (Linn.)... T. & H.                                                                   | " "                      | .....   | 145        | 29       | 1                |
| Eoc.             | $\frac{5545}{1}$ | Type.                | <b>Fusus</b> Lamarck.<br><i>angularis</i> ..... <i>Whitf.</i><br>"<br><i>parilis</i> .....         | Mon. G. S.<br>Pal. N. J. | 18<br>2 | 194<br>194 | 24<br>24 | 15, 16<br>15, 16 |
| Mioc.            | $\frac{5546}{1}$ | Fig'd.               | <b>Galeodea</b> Link.<br><i>Hodgei</i> (Con.)... T. & H.                                           | P. F. S. C.              | .....   | 138        | 28       | 10               |
| Eoc.             | $\frac{5547}{1}$ | Type.                | <b>Helix</b> Linn.<br><i>Leidyi</i> .....H. & M.                                                   | Mem. A. M.               | 5, N.S. | 394        | 3        | 12a, b           |
| "                | $\frac{5548}{1}$ | "                    | <b>Leptomaria</b> Deslongchamps<br><i>pergranulosa</i> ..... <i>Whitf.</i><br>"                    | Mon. G. S.<br>Pal. N. J. | 18<br>2 | 234<br>234 | 36<br>36 | 3-6<br>3-6       |
| "                | $\frac{5549}{2}$ | Fig'd.               | ? <i>perlata</i> (Con.)... <i>Whitf.</i><br>"                                                      | Mon. G. S.<br>Pal. N. J. | 18<br>2 | 232<br>232 | 35<br>35 | 1, 2<br>1, 2     |
| Plioc.           | $\frac{5550}{1}$ | "                    | <b>Littorina</b> de Férussac.<br><i>irrorata</i> (Say)... T. & H.                                  | P. F. S. C.              | .....   | 119        | 26       | 5                |
| Eoc.             | $\frac{5551}{1}$ | Type.                | <b>Melania</b> Lamarck.<br><i>claibornensis</i> ... <i>Heilprin</i> .                              | P. A. N. S.              | 30      | 214        | 13       | 11               |
| "                | $\frac{5552}{1}$ | "                    | <b>Mesostoma</b> Deshayes.<br><i>rugosum</i> ..... <i>Heilprin</i> .                               | " "                      | 30      | 215        | 13       | 13               |
| Mioc.            | $\frac{5553}{1}$ | Fig'd.               | <b>Mitra</b> Lamarck.<br><i>carolinensis</i> (Con.) T. & H.                                        | P. F. S. C.              | .....   | 129        | 27       | 9                |



| LOCALITY.                   | REMARKS.                                                                                                                                                                                                                             |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Claiborne, Ala.<br>.....    | As type of <i>Delphinula solaroides</i> . Entire.<br>See <i>Delphinula elegans</i> .                                                                                                                                                 |
| Darlington, S. C.           | As <i>Turris lunatum</i> . The lip has been somewhat broken.                                                                                                                                                                         |
| Pee Dee, S. C.              | " <i>Colus quadricostatus</i> . Entire individual.                                                                                                                                                                                   |
| Darlington, S. C.           | " <i>Apollon caudata</i> . Entire.                                                                                                                                                                                                   |
| Shark River, N. J.          | Cast of upper four volutions, imbedded, and cast of lower three whorls of another individual.                                                                                                                                        |
| " "                         | The specimen has been lost through decomposition and disintegration.                                                                                                                                                                 |
| " "                         | Cast. Most of the matrix is present also.                                                                                                                                                                                            |
| " "                         | Cast showing three whorls.                                                                                                                                                                                                           |
| Waccamaw, S. C.             | As <i>Busycon canaliculatum</i> . The specimen has a smaller apical angle than the figure indicates.                                                                                                                                 |
| " "                         | As <i>Busycon carica</i> . An individual of medium size.                                                                                                                                                                             |
| Shark River, N. J.<br>..... | Cast, somewhat flattened.<br>See <i>Buccinofusus parilis</i> .                                                                                                                                                                       |
| Pee Dee, S. C.              | An individual.                                                                                                                                                                                                                       |
| Bear Creek, S. D.           | Cast. From the Bad Lands.                                                                                                                                                                                                            |
| Shark River, N. J.          | Internal cast and matrix of an individual.                                                                                                                                                                                           |
| " "                         | Cast.                                                                                                                                                                                                                                |
| South Carolina.             | A small individual, probably young.                                                                                                                                                                                                  |
| Claiborne, Ala.             | Individual with broken lip.                                                                                                                                                                                                          |
| " "                         | Individual with imperfect aperture.                                                                                                                                                                                                  |
| Pee Dee, S. C.              | An individual cited by Conrad, P. A. N. S., Vol. 14, p. 563, as one of the types of his genus <i>Pleioptygma</i> , but Dall, T. W. I. S., vol. 3, p. 91, says that there is no ground for separating the species from <i>Mitra</i> . |

Class GASTROPODA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                                     | REFERENCE.  |       |       |       |            |
|---------------|------------------|-------------------|------------------------------------------------------------------------------------------------|-------------|-------|-------|-------|------------|
|               |                  |                   |                                                                                                | Work.       | Vol.  | P.    | Pl.   | Figs.      |
| Mioc.         | <u>5554</u><br>1 | Fig'd.            | <b>Nassa</b> Lamarck.<br>vibex ( <i>Say</i> ).... <i>T. &amp; H.</i>                           | P. F. S. C. | ..... | 134   | 28    | 3          |
| Eoc.          | <u>5555</u><br>1 | Type.             | <b>Natica</b> Adanson.<br>bisulcata..... <i>Heilprin.</i>                                      | P. A. N. S. | 30    | 212   | 13    | 4          |
| "             | <u>5556</u><br>1 | "                 | globulella ..... <i>Whitf.</i>                                                                 | Mon. G. S.  | 18    | 226   | 34    | 3, 4       |
| "             |                  | "                 | "                                                                                              | Pal. N. J.  | 2     | 226   | 34    | 3, 4       |
| "             | <u>5557</u><br>1 | "                 | <b>Odostomia</b> Fleming.<br>laevigata..... <i>Heilprin.</i>                                   | P. A. N. S. | 30    | 212   | 13    | 5          |
| Mioc.         | <u>5557</u><br>1 | Fig'd.            | <b>Oliva</b> Bruguière.<br>litterata ( <i>Lam.</i> ) <i>T. &amp; H.</i>                        | P. F. S. C. | ..... | 140   | 28    | 13         |
| Eoc.          | <u>5559</u><br>1 | Type.             | <b>Pisania</b> Bivona.<br>bucciniformis .. <i>Heilprin.</i>                                    | P. A. N. S. | 30    | 213   | 13    | 7          |
| "             | <u>5560</u><br>1 | Fig'd.            | <b>Pleurotoma</b> Lamarck.<br>denticula ( <i>Basterot</i> ) <i>Heilp.</i>                      | " "         | 30    | 214   | 13    | 10         |
| "             | <u>5561</u><br>1 | Type.             | insignifica.....                                                                               | " "         | 30    | 213   | 13    | 9          |
| "             | <u>5562</u><br>1 | "                 | regularicostata ... <i>Whitf.</i>                                                              | Mon. G. S.  | 18    | 215   | 33    | 9          |
| "             |                  | "                 | "                                                                                              | Pal. N. J.  | 2     | 215   | 33    | 9          |
| "             | <u>5563</u><br>1 | "                 | ( <i>Surcula</i> ?)<br>altispira..... <i>Whitf.</i>                                            | Mon. G. S.  | 18    | 216   | 33    | 10, 11     |
| "             |                  | "                 | "                                                                                              | Pal. N. J.  | 2     | 216   | 33    | 10, 11     |
| "             | <u>5564</u><br>1 | "                 | <b>Rhinocantha</b> <i>H. &amp; A. Adams</i> <i>ms.</i><br>? <i>Conradi</i> ..... <i>Whitf.</i> | Mon. G. S.  | 18    | 191   | 24    | 8, 11      |
| "             |                  | "                 | "                                                                                              | Pal. N. J.  | 2     | 191   | 24    | 8, 11      |
| "             | <u>5565</u><br>1 | "                 | <b>Rissoina</b> d'Orbigny.<br>plicato-varicosa <i>Heilprin.</i>                                | P. A. N. S. | 30    | 214   | 13    | 12         |
| "             | <u>5566</u><br>1 | "                 | <b>Rostellaria</b> Lamarck.<br><i>Whitfieldi</i> ..... <i>Heilprin.</i>                        | " "         | 30    | 216   | 13    | 14         |
| "             | <u>5567</u><br>1 | "                 | <b>Scalaria</b> Lamarck.<br>tenuilirata ..... <i>Whitf.</i>                                    | Mon. G. S.  | 18    | 229   | 34    | 10-12      |
| "             |                  | "                 | "                                                                                              | Pal. N. J.  | 2     | 229   | 34    | 10-12      |
| Plioc.        | <u>5568</u><br>1 | "                 | <b>Scaphella</b> Swainson.<br><i>Trenholmi</i> ..... <i>T. &amp; H.</i>                        | P. F. S. C. | ..... | 128   | 27    | 7          |
| "             | <u>5568</u><br>2 | "                 | " .....                                                                                        | " "         | ..... | 128   | 27    | 8          |
| Eoc.          | <u>5569</u><br>1 | Fig'd.            | <b>Solarium</b> Lamarck.<br>annosum ( <i>Con.</i> ).. <i>Whitf.</i>                            | Mon. G. S.  | 18    | 228   | 34    | 23, 26, 27 |
| "             |                  | "                 | "                                                                                              | Pal. N. J.  | 2     | 228   | 34    | 23, 26, 27 |
| "             | <u>5570</u><br>1 | Type.             | striato-granulatum <i>Heilp.</i>                                                               | P. A. N. S. | 30    | 212   | 13    | 3          |
| "             |                  | "                 | <b>Strephona</b> Browne.<br><i>literata</i> .....                                              | .....       | ..... | ..... | ..... | .....      |
| Eoc.          | <u>5571</u><br>1 | Type.             | <b>Teinostoma</b> <i>H. &amp; A. Adams</i><br><i>rotula</i> ..... <i>Heilprin.</i>             | P. A. N. S. | 30    | 211   | 13    | 1          |
| "             |                  | "                 | <b>Terebellum</b> Klein.<br><i>etiwanensis</i> .....                                           | .....       | ..... | ..... | ..... | .....      |
| "             |                  | "                 | <i>Tornatella</i> Lamarck.....                                                                 | .....       | ..... | ..... | ..... | .....      |
| "             |                  | "                 | <i>bicincta</i> .....                                                                          | .....       | ..... | ..... | ..... | .....      |



| LOCALITY.          | REMARKS.                                                                        |
|--------------------|---------------------------------------------------------------------------------|
| Pee Dee, S. C.     | As <i>Buccinum vibex</i> . A small individual.                                  |
| Claiborne, Ala.    | Individual with imperfect aperture.                                             |
| Shark River, N. J. | Cast, obliquely compressed.                                                     |
| Claiborne, Ala.    | Lower two whorls of an individual, aperture imperfect.                          |
| Pee Dee? S. C.     | As <i>Strephona literata</i> . Entire. May have come from Smith's, Goose Creek. |
| Claiborne, Ala.    | Lower portion of an individual.                                                 |
| “ “                | Individual with apex missing.                                                   |
| “ “                | Individual with apex missing.                                                   |
| Shark River, N. J. | External imprint.                                                               |
| “ “                | Cast, somewhat compressed.                                                      |
| “ “                | Two casts, one of which (fig. 8) has been distorted.                            |
| Claiborne, Ala.    | Individual with imperfect aperture.                                             |
| “ “                | Weathered individual with imperfect apex and aperture.                          |
| Shark River, N. J. | Cast of interior and imprint of exterior of same individual.                    |
| Waccamaw, S. C.    | As <i>Voluta Trenholmi</i> . A rather small individual. Miocene?                |
| Sumter, S. C.      | “ “ “ An adult. Miocene?                                                        |
| .....              | “ <i>Architectonica annosa</i> .                                                |
| Shark River, N. J. | “ “ “ Cast preserving some of the external features.                            |
| Claiborne, Ala.    | Individual with imperfect aperture.                                             |
| .....              | See <i>Oliva litterata</i> .                                                    |
| Claiborne, Ala.    | Entire. Compare <i>Delphinula depressa</i> Lea.                                 |
| .....              | See <i>Turritella etiwanaensis</i> .                                            |
| .....              | Synonym of <i>Actæon</i> .                                                      |
| .....              | See <i>Actæon bicinctus</i> .                                                   |

Class GASTROPODA—Continued.

| Geol. Subdiv.                 | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.               | REFERENCE.             |       |       |       |        |
|-------------------------------|------------------|-------------------|------------------------------------------|------------------------|-------|-------|-------|--------|
|                               |                  |                   |                                          | Work.                  | Vol.  | P.    | Pl.   | Figs.  |
| Mioc.                         | <u>5572</u><br>1 | Type.             | <i>Turris</i> Humphrey.....              | .....                  | ..... | ..... | ..... | .....  |
|                               |                  |                   | <i>lunatum</i> .....                     | .....                  | ..... | ..... | ..... |        |
|                               |                  |                   | <b>Turritella</b> Lamarck.               |                        |       |       |       |        |
|                               |                  |                   | etiwanensis .... <i>T. &amp; H.</i>      | P. F. S. C.            | ..... | 122   | 26    | 10     |
| Eoc.                          | <u>5573</u><br>1 | Type.             | <b>Voluta</b> Linn.                      |                        |       |       |       |        |
|                               |                  |                   | <i>mutabilis</i> .....                   | .....                  | ..... | ..... | ..... |        |
|                               | .....            | “                 | Newcombiana.... <i>Whitf.</i>            | Mon. G. S.             | 18    | 211   | 32    | 3      |
|                               |                  |                   | “                                        | Pal. N. J.             | 2     | 211   | 32    | 3      |
|                               | .....            | “                 | parvula..... <i>Whitf.</i>               | Mon. G. S.             | 18    | 208   | 31    | 5      |
|                               |                  |                   | “                                        | Pal. N. J.             | 2     | 208   | 31    | 5      |
|                               | <u>5575</u><br>1 | “                 | perelevata..... <i>Whitf.</i>            | Mon. G. S.             | 18    | 208   | 30    | 4, 5   |
|                               |                  |                   | “                                        | Pal. N. J.             | 2     | 208   | 30    | 4, 5   |
|                               | .....            | “                 | scaphoides..... <i>Whitf.</i>            | Mon. G. S.             | 18    | 209   | 31    | 6-8    |
|                               |                  |                   | “                                        | Pal. N. J.             | 2     | 209   | 31    | 6-8    |
|                               | <u>5577</u><br>1 | “                 | ( <b>Amoria</b> .)                       |                        |       |       |       |        |
|                               |                  |                   | vesta. .... <i>Whitf.</i>                | Mon. G. S.             | 18    | 210   | 32    | 4-6    |
|                               |                  |                   | “                                        | Pal. N. J.             | 2     | 210   | 32    | 4-6    |
|                               | Eoc.             | <u>5578</u><br>1  | Type.                                    | <i>Trenholmi</i> ..... | ..... | ..... | ..... | .....  |
| <b>Volutilithes</b> Swainson. |                  |                   |                                          |                        |       |       |       |        |
| .....                         |                  | “                 | cancellatus..... <i>Whitf.</i>           | Mon. G. S.             | 18    | 213   | 30    | 7, 9   |
|                               |                  |                   | “                                        | Pal. N. J.             | 2     | 213   | 30    | 7, 9   |
| <u>5579</u><br>1              |                  | Fig'd.            | Sayanus ( <i>Con.</i> )... <i>Whitf.</i> | Mon. G. S.             | 18    | 212   | 30    | 11, 12 |
|                               |                  |                   | “                                        | Pal. N. J.             | 2     | 212   | 30    | 11, 12 |
| <u>5580</u><br>1              |                  | “                 | “ “ ... “                                | Mon. G. S.             | 18    | 212   | 30    | 15     |
|                               |                  |                   | “                                        | Pal. N. J.             | 2     | 212   | 30    | 15     |
| <u>5581</u><br>1              |                  | Type.             | <b>Xenophora</b> Fischer.                |                        |       |       |       |        |
|                               |                  |                   | lapiferens..... <i>Whitf.</i>            | Mon. G. S.             | 18    | 227   | 34    | 8, 9   |
|                               |                  | “                 | Pal. N. J.                               | 2                      | 227   | 34    | 8, 9  |        |

Class CEPHALOPODA.

|      |                  |       |                                                          |            |    |     |    |      |
|------|------------------|-------|----------------------------------------------------------|------------|----|-----|----|------|
| Eoc. | <u>5582</u><br>1 | Type. | <b>Nautilus</b> Breynius.<br>Cookanus..... <i>Whitf.</i> | Mon. G. S. | 18 | 285 | 49 | 4, 5 |
|      |                  |       | “<br>“                                                   | Pal. N. J. | 2  | 285 | 49 | 4, 5 |

Subkingdom VERTEBRATA.

|      |                  |                    |                                                                    |             |       |       |       |       |
|------|------------------|--------------------|--------------------------------------------------------------------|-------------|-------|-------|-------|-------|
| Eoc. | <u>5583</u><br>1 | Gen. and Sp. Type. | <b>Notogoneus</b> Cope.<br><i>osculus</i> Whitf. (non Cope.) ..... | .....       | ..... | ..... | ..... | ..... |
|      |                  |                    | <b>Protocatostomus</b> Whitf.<br>Constablei..... <i>Whitf.</i>     | A. M. N. H. | 3     | 120   | 4     | 1-5   |
|      |                  |                    | “<br>“                                                             | “           | “     | “     | “     | “     |

Class MAMMALIA.

|       |                  |                    |                                                            |             |         |         |     |     |
|-------|------------------|--------------------|------------------------------------------------------------|-------------|---------|---------|-----|-----|
| Mioc. | <u>5584</u><br>1 | Gen. and Sp. Type. | <b>Dinictis</b> Leidy.<br>felina... .. <i>Leidy.</i>       | P. A. N. S. | 8       | 91      | 5   | 1-4 |
|       |                  |                    | “<br>“                                                     | J. A. N. S. | 7, N.S. | 64      | 5   | 1-4 |
| “     | <u>5585</u><br>1 | Type.              | <b>Rhinoceros</b> Linn.<br>occidentalis..... <i>Leidy.</i> | “           | “       | 7, N.S. | 220 | 21  |
|       |                  |                    | “<br>“                                                     | “           | “       | “       | “   | “   |



| LOCALITY.                        | REMARKS.                                                                                                                                                                                                                             |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                            | Synonym of <i>Pleurotoma</i> .<br>See <i>Drillia lunata</i> .                                                                                                                                                                        |
| Pee Dee or<br>Goose Creek, S. C. | As <i>Terebellum etiwanensis</i> . A small specimen (young).                                                                                                                                                                         |
| .....                            | See <i>Aurinia mutabilis</i> and <i>Aurinia obtusa</i> .                                                                                                                                                                             |
| Shark River, N. J.               | Internal cast.                                                                                                                                                                                                                       |
| “ “                              | Specimen lost by decomposition and disintegration.                                                                                                                                                                                   |
| “ “                              | An imperfect cast.                                                                                                                                                                                                                   |
| “ “                              | Specimen lost by decomposition and disintegration.                                                                                                                                                                                   |
| “ “                              | A cast.                                                                                                                                                                                                                              |
| .....                            | See <i>Scaphella Trenholmi</i> .                                                                                                                                                                                                     |
| Shark River, N. J.               | Two casts preserving some external features.                                                                                                                                                                                         |
| “ “                              | Two casts preserving some external features ; one is compressed.                                                                                                                                                                     |
| Claiborne, Ala.                  | Entire individual.                                                                                                                                                                                                                   |
| Shark River, N. J.               | A cast which has suffered much from decomposition.                                                                                                                                                                                   |
|                                  |                                                                                                                                                                                                                                      |
| Shark River, N. J.               | A somewhat compressed cast of a young individual.                                                                                                                                                                                    |
| Class PISCES.                    |                                                                                                                                                                                                                                      |
| .....                            | See <i>Protocatostomus Constablei</i> .                                                                                                                                                                                              |
| Twin Creek, Wyo.                 | As <i>Notogoneus osculus</i> Cope? in the explanation of plate. The specimen as described.                                                                                                                                           |
|                                  |                                                                                                                                                                                                                                      |
| White River<br>Bad Lands, S. D.  | The somewhat mutilated and crushed skull and lower jaw which were described and figured.                                                                                                                                             |
| “ “                              | Besides the front teeth which are figured, the specimen preserves in place the six molars of the right side and the second premolar on the left side. In this specimen there are no indications of the existence of first premolars. |

Class MAMMALIA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.  | REFERENCE.  |        |     |     |       |
|------------------|------------------|----------------------|-----------------------------|-------------|--------|-----|-----|-------|
|                  |                  |                      |                             | Work.       | Vol.   | P.  | Pl. | Figs. |
| Mioc.            | <u>5586</u><br>1 | Fig'd.               | <b>Titanotherium</b> Leidy. |             |        |     |     |       |
|                  |                  |                      | Prouti..... <i>Leidy</i> .  | J. A. N. S. | 7,N.S. | 206 | 24  | I, 2  |



| LOCALITY.                       | REMARKS.                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| White River<br>Bad Lands, S. D. | This is the "characteristic specimen" described in the second paragraph on p. 207 of Dr. Leidy's paper. It consists of the front of the jaw, all the teeth of the left side entire, except the last molar, which lacks the outer half, and the second, third and fourth premolar, parts of the first and second true molar and all of the third of the right side. |

Quaternary.

Kingdom ANIMALIA.

Subkingdom

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                 | REFERENCE.  |       |       |       |       |
|---------------|------------------|-------------------|----------------------------------------------------------------------------|-------------|-------|-------|-------|-------|
|               |                  |                   |                                                                            | Work.       | Vol.  | P.    | Pl.   | Figs. |
| Pleist.       | $\frac{5590}{1}$ | Fig'd.            | <b>Astræa</b> Lamarck.                                                     |             |       |       |       |       |
|               |                  |                   | <i>bella</i> .....                                                         | .....       | ..... | ..... | ..... | ..... |
|               |                  |                   | <i>crassa</i> .....                                                        | .....       | ..... | ..... | ..... | ..... |
|               |                  |                   | <i>petrosa</i> Hs. (non Dana)..                                            | .....       | ..... | ..... | ..... | ..... |
| Pleist.       | $\frac{5590}{1}$ | Fig'd.            | <b>Astrangia</b> E. & H.<br>astreiformis ( <i>E. &amp; H.</i> ) <i>Hs.</i> | P. P. S. C. | ..... | I     | I     | 2     |
| Recent?       | $\frac{5591}{1}$ | "                 | <b>Dichocœnia</b> E. & H.<br>Stokesi ( <i>E. &amp; H.</i> )... <i>Hs.</i>  | " "         | ..... | 2     | I     | 4, 4a |
| Pleist.       | $\frac{5592}{1}$ | Type.             | <b>Favites</b> Link.<br><i>crassa</i> ..... <i>Holmes.</i>                 | " "         | ..... | 2     | I     | 3, 3a |

Subkingdom ECHINODERMATA.

|         |                  |        |                                                                                                                |             |       |   |   |      |
|---------|------------------|--------|----------------------------------------------------------------------------------------------------------------|-------------|-------|---|---|------|
| Pleist. | $\frac{5593}{1}$ | Fig'd. | <b>Mellita</b> Klein.<br><i>quinquefora</i> <i>Lam., var.</i><br><i>ampla</i> ( <i>Ravenel</i> )... <i>Hs.</i> | P. P. S. C. | ..... | 3 | I | 6-6b |
|---------|------------------|--------|----------------------------------------------------------------------------------------------------------------|-------------|-------|---|---|------|

MOLLUSCOIDEA.

|         |                  |        |                                                                                     |             |       |   |   |   |
|---------|------------------|--------|-------------------------------------------------------------------------------------|-------------|-------|---|---|---|
| Pleist. | $\frac{5594}{1}$ | Fig'd. | <b>Reptocelleporaria</b> d'Orb.<br><i>informata</i> ( <i>Lons.</i> ).... <i>Hs.</i> | P. P. S. C. | ..... | 6 | I | 5 |
|---------|------------------|--------|-------------------------------------------------------------------------------------|-------------|-------|---|---|---|

Subkingdom MOLLUSCA.

|          |                  |        |                                                                                                              |             |       |       |       |       |
|----------|------------------|--------|--------------------------------------------------------------------------------------------------------------|-------------|-------|-------|-------|-------|
| Pleist.  | $\frac{5595}{1}$ | Fig'd. | <b>Abra</b> Leach.<br><i>æqualis</i> ( <i>Say</i> ).... <i>Holmes.</i>                                       | P. P. S. C. | ..... | 50    | 8     | 7     |
| "        | $\frac{5596}{1}$ | Type.  | <i>angulata</i> ..... <i>Holmes.</i>                                                                         | " "         | ..... | 50    | 8     | 8     |
| Pleist.  | $\frac{5597}{1}$ | Fig'd. | <b>Anomia</b> (Linn) Müller.<br><i>ephippium</i> Hs. (non Linn).                                             | .....       | ..... | ..... | ..... | ..... |
|          |                  |        | <i>simplex</i> ( <i>d'Orb.</i> ) <i>Holmes.</i>                                                              | P. P. S. C. | ..... | II    | 2     | II    |
| Pleist ? | $\frac{5598}{1}$ | Fig'd. | <b>Arca</b> Linn.<br><i>americana</i> .....                                                                  | .....       | ..... | ..... | ..... | ..... |
|          |                  |        | <i>cæolata</i> .....                                                                                         | .....       | ..... | ..... | ..... | ..... |
|          |                  |        | <i>ponderosa</i> .....                                                                                       | .....       | ..... | ..... | ..... | ..... |
|          |                  |        | <b>Argina</b> Gray.....                                                                                      | .....       | ..... | ..... | ..... | ..... |
| Pleist ? | $\frac{5598}{1}$ | Fig'd. | <i>campechensis</i> ( <i>Gmel.</i> ) <i>Hs.</i>                                                              | P. P. S. C. | ..... | I9    | 4     | 2, 2a |
| Pleist.  | $\frac{5599}{1}$ | Fig'd. | <b>Astarte</b> Sowerby.<br><i>lunulata</i> .....                                                             | .....       | ..... | ..... | ..... | ..... |
|          |                  |        | <b>Atrina</b> Gray.<br><i>rigida</i> ( <i>Dillwyn</i> ) <i>Holmes.</i>                                       | P. P. S. C. | ..... | I4    | 3     | 2     |
|          |                  |        | <b>Avicula</b> Klein.<br><i>atlantica</i> .....                                                              | .....       | ..... | ..... | ..... | ..... |
|          |                  |        | <i>colymbus</i> ( <i>Bolten</i> )... <i>Hs.</i>                                                              | P. P. S. C. | ..... | I4    | 3     | I     |
| Pleist.  | $\frac{5601}{1}$ | Fig'd. | <b>Callista</b> Poli.<br><i>gigantea</i> Hs. (non Gmel.)<br><i>nimbosa</i> ( <i>Sol.</i> )... <i>Holmes.</i> | P. P. S. C. | ..... | 36    | 7     | 3     |



| CŒLEENTERATA. Class ACTINOZOA.     |                                                                                                         |
|------------------------------------|---------------------------------------------------------------------------------------------------------|
| LOCALITY.                          | REMARKS.                                                                                                |
| .....                              | See <i>Astrangia astreiformis</i> and <i>Astrangia bella</i> .                                          |
| .....                              | “ <i>Favites crassa</i> .                                                                               |
| .....                              | “ <i>Dichocænia Stokesi</i> .                                                                           |
| South Carolina.                    | As <i>Astræa bella</i> Con. A small colony.                                                             |
| St. Andrews, S. C.                 | “ “ <i>petrosa</i> Dana. A small, water-worn mass.                                                      |
| Charleston, S. C.                  | “ “ <i>crassa</i> . A fragmentary branch.                                                               |
| Class ECHINOIDEA.                  |                                                                                                         |
| Simmons' Bluff, S. C.              | Two large individuals, slightly broken.                                                                 |
| Class POLYZOA.                     |                                                                                                         |
| Charleston, S. C.                  | A colony on a bit of oyster shell.                                                                      |
| Class LAMELLIBRANCHIATA.           |                                                                                                         |
| Simmons' Bluff, S. C.              | Two opposite, detached valves.                                                                          |
| Simmons' Bluff or Abbapoola, S. C. | Two detached, opposite valves.                                                                          |
| .....                              | See <i>Anomia simplex</i> .                                                                             |
| Simmons' Bluff, S. C.              | As “ <i>ephippium</i> Linn. A single valve of medium size.                                              |
| .....                              | See <i>Argina campechensis</i> .                                                                        |
| .....                              | “ <i>Fossularca Adamsi</i> .                                                                            |
| .....                              | “ <i>Noëtia ponderosa</i> .                                                                             |
| .....                              | Considered by Dall a section of <i>Scapharca</i> , a subgenus under <i>Arca</i> .                       |
| Charleston, S. C.                  | As <i>Arca americana</i> Gray. Both valves of an individual.                                            |
| .....                              | See <i>Crassinella lunulata</i> .                                                                       |
| Simmons' Bluff, S. C.              | As <i>Pinna seminuda</i> Lam. The broken portion represented, except that a small part has disappeared. |
| .....                              | See <i>Avicula colymbus</i> .                                                                           |
| Abbapoola or John's Island, S. C.  | As “ <i>atlantica</i> Lam. A right valve which has been damaged since the figure was made.              |
| .....                              | See <i>Callista nimbosa</i> .                                                                           |
| Simmons' Bluff, S. C.              | As “ <i>gigantea</i> Gmelin. The left valve represented in the figure.                                  |

## Class LAMELLIBRANCHIATA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.                          | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                                     | REFERENCE.                 |                |             |            |                             |
|------------------|--------------------------------------|----------------------|------------------------------------------------------------------------------------------------|----------------------------|----------------|-------------|------------|-----------------------------|
|                  |                                      |                      |                                                                                                | Work.                      | Vol.           | P.          | Pl.        | Figs.                       |
| Pleist.<br>?     | $\frac{5602}{1}$<br>$\frac{5603}{1}$ | Fig'd.<br>"          | <b>Cardita</b> Bruguière.<br><i>tridentata</i> .....                                           | .....                      | .....          | .....       | .....      | .....                       |
|                  |                                      |                      | <b>Cardium</b> Linn.<br><i>magnum</i> .....                                                    | .....                      | .....          | .....       | .....      | .....                       |
|                  | $\frac{5604}{1}$                     | Fig'd.<br>"          | <b>Chione</b> Megerie.<br><i>cancellata</i> (Linn.) Holmes.                                    | P. P. S. C.                | .....          | 35          | 6          | 14                          |
|                  |                                      |                      | <i>cribraria</i> (Con.).. Holmes.                                                              | " "                        | .....          | 35          | 6          | 15                          |
|                  | $\frac{5605}{1}$                     | "                    | <b>Corbula</b> Bruguière.<br><i>contracta</i> .....                                            | .....                      | .....          | .....       | .....      | .....                       |
| Pleist.          | $\frac{5606}{1}$                     | Fig'd.               | <b>Crassinella</b> Bayle.<br><i>lunulata</i> ..... Holmes.                                     | P. P. S. C.                | .....          | 32          | 6          | 9                           |
| "                | $\frac{5607}{1}$                     | "                    | <b>Cumingia</b> Sowerby.<br><i>tellinoides</i> (Con.) Holmes.                                  | " "                        | .....          | 53          | 8          | 12                          |
| "                | $\frac{5608}{1}$                     | "                    | <b>Cuneocorbula</b> Cossman.<br><i>contracta</i> (Say).. Holmes.                               | " "                        | .....          | 56          | 8          | 17 ( <i>pars</i> )          |
| "                | $\frac{5609}{1}$                     | "                    | <b>Dinocardium</b> Dall.<br><i>robustum</i> (Sol.).. Holmes.                                   | " "                        | .....          | 23          | 5          | 2, 2a                       |
| Pleist?          | $\frac{5610}{1}$                     | "                    | <b>Diplodonta</b> Brown.<br><i>soror</i> (Adanson) Holmes.                                     | " "                        | .....          | 29          | 6          | 5                           |
| Pleist.          | $\frac{5611}{1}$                     | Type.                | <b>Divaricella</b> E. von Martens.<br>Conradi ..... d'Orb.<br>Holmes.                          | Pr. de Pal.<br>P. P. S. C. | 3<br>.....     | 117<br>27   | .....<br>6 | .....<br>1                  |
| Pleist.          | $\frac{5612}{1}$                     | Fig'd.               | <b>Ensis</b> Schumacher.<br><i>ensis</i> Holmes (non Linn).<br><i>minor</i> (Dall).... Holmes. | .....<br>P. P. S. C.       | .....<br>..... | .....<br>53 | .....<br>8 | .....<br>13 ( <i>pars</i> ) |
| "                | $\frac{5613}{1}$                     | Type.                | <b>Ervilia</b> Turton.<br><i>concentrica</i> ..... Holmes.                                     | " "                        | .....          | 44          | 6          | 10                          |
| "                | $\frac{5614}{1}$                     | Fig'd.               | <b>Eurytellina</b> P. Fischer.<br><i>alternata</i> (Say)... Holmes.                            | " "                        | .....          | 45          | 8          | 1                           |
| " ?              | $\frac{5615}{1}$                     | "                    | <b>Fossularca</b> Cossman.<br><i>Adamsi</i> (Shuttleworth)<br>Holmes.                          | " "                        | .....          | 22          | 4          | 6, 6a                       |
| "                | $\frac{5616}{1}$                     | "                    | <b>Glycymeris</b> Da Costa.<br><i>americana</i> (Deufr.) Holmes.                               | " "                        | .....          | 15          | 3          | 4                           |
| "                | $\frac{5617}{1}$                     | "                    | <b>Labiosa</b> Schmidt<br><i>canaliculata</i> (Say) Holmes.                                    | " "                        | .....          | 43          | 7          | 13                          |
| "                | $\frac{5618}{1}$                     | "                    | <i>lineata</i> (Say).... Holmes.                                                               | " "                        | .....          | 42          | 7          | 12                          |
| "                | $\frac{5619}{1}$                     | "                    | <b>Lævicardium</b> Swainson.<br><i>serratum</i> (Linn) Holmes.                                 | " "                        | .....          | 25          | 5          | 5                           |



| LOCALITY.                                  | REMARKS.                                                                                                                                                                                  |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                                      | See <i>Pleuromeris tridentata</i> .                                                                                                                                                       |
| .....                                      | See <i>Dinocardium robustum</i> .                                                                                                                                                         |
| Simmons' Bluff, S. C.<br>Charleston, S. C. | A right valve.<br>A left valve.                                                                                                                                                           |
| .....                                      | See <i>Cuneocorbula contracta</i> .                                                                                                                                                       |
| Simmons' Bluff, S. C.                      | As <i>Astarte lunulata</i> Con. A single valve.                                                                                                                                           |
| " "                                        | A right valve.                                                                                                                                                                            |
| " "                                        | As <i>Corbula contracta</i> Say. A left valve. A right valve which is too small is indicated as the original of the other half of the figure. May have come from Abbapoola or Charleston. |
| " "                                        | As <i>Cardium magnum</i> Born. Entire.                                                                                                                                                    |
| Ashley River, S. C.                        | As type of <i>Lucina kiawahensis</i> Holmes. The detached valves of an individual.                                                                                                        |
| .....                                      | As <i>Lucina Conradii</i> .                                                                                                                                                               |
| Simmons' Bluff, S. C.                      | " " <i>divaricata</i> Linn. A single valve.                                                                                                                                               |
| .....                                      | See <i>Ensis minor</i> .                                                                                                                                                                  |
| Simmons' Bluff, S. C.                      | As " <i>ensis</i> Linn. The left valve figured, which has lost half an inch of the posterior end.                                                                                         |
| Simmons' Bluff or<br>St. Paul's, S. C.     | As <i>Mesodesma concentrica</i> . A single valve.                                                                                                                                         |
| Simmons' Bluff, S. C.                      | " <i>Peronæoderma alternata</i> . The separated valves of an individual of medium size. May have come from John's Island, Abbapoola Crk.                                                  |
| John's Island,<br>Abbapoola Creek, S.C.    | As <i>Arca cælata</i> Con. Conrad's specific name was preoccupied. The right valve of the individual figured.                                                                             |
| Simmons' Bluff, S. C.                      | As type of <i>Pectunculus carolinensis</i> Holmes. A worn valve.                                                                                                                          |
| " "                                        | " <i>Raëta canaliculata</i> . The left valve of those figured.                                                                                                                            |
| " "                                        | " " <i>lineata</i> . A right valve.                                                                                                                                                       |
| Abbapoola Creek, S. C.                     | A left valve, the rear fourth of which has been broken off since the figure was made.                                                                                                     |

## Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                 | REFERENCE.  |       |       |       |                   |
|---------------|------------------|-------------------|------------------------------------------------------------|-------------|-------|-------|-------|-------------------|
|               |                  |                   |                                                            | Work.       | Vol.  | P.    | Pl.   | Figs.             |
| Pleist.       | $\frac{5618}{1}$ | Fig'd.            | <b>Leda</b> Schumacher.<br><i>acuta</i> (Con.).....Holmes. | P. P. S. C. | ..... | 16    | 3     | 7                 |
|               |                  |                   | <i>limatula</i> .....                                      | .....       | ..... | ..... | ..... | .....             |
| Pleist ?      | $\frac{5619}{1}$ | Fig'd.            | <b>Lucina</b> Bruguière.<br><i>costata</i> (T. & H.)...Hs. | P. P. S. C. | ..... | 27    | 6     | 2                 |
|               |                  |                   | <i>Conradii</i> .....                                      | .....       | ..... | ..... | ..... | .....             |
|               |                  |                   | <i>divaricata</i> .....                                    | .....       | ..... | ..... | ..... | .....             |
|               |                  |                   | <i>kiawahensis</i> .....                                   | .....       | ..... | ..... | ..... | .....             |
| Pleist.       | $\frac{5620}{1}$ | Fig'd.            | <b>Macoma</b> Leach.<br><i>balthica</i> (Linn)...Holmes.   | P. P. S. C. | ..... | 48    | 8     | 5                 |
|               |                  |                   | <i>fusca</i> .....                                         | .....       | ..... | ..... | ..... | .....             |
| Pleist.       | $\frac{5621}{1}$ | Fig'd.            | <i>tenta</i> (Say).....Holmes.                             | P. P. S. C. | ..... | 46    | 8     | 3                 |
|               |                  |                   | <b>Mactra</b> Linn.<br><i>lateralis</i> .....              | .....       | ..... | ..... | ..... | .....             |
|               |                  |                   | <b>Mercenaria</b> Schumacher.<br><i>Mortoni</i> .....      | .....       | ..... | ..... | ..... | .....             |
|               |                  |                   | <i>notata</i> .....                                        | .....       | ..... | ..... | ..... | .....             |
|               |                  |                   | <i>violacea</i> .....                                      | .....       | ..... | ..... | ..... | .....             |
|               |                  |                   | <b>Mesodesma</b> Deshayes.<br><i>concentrica</i> .....     | .....       | ..... | ..... | ..... | .....             |
| Pleist ?      | $\frac{5622}{1}$ | Fig'd.            | <b>Mulinia</b> Gray<br><i>lateralis</i> (Say)...Holmes.    | P. P. S. C. | ..... | 40    | 7     | 9 ( <i>pars</i> ) |
| "             | $\frac{5623}{1}$ | Type.             | <i>milesi</i> .....                                        | " "         | ..... | 42    | 7     | 11                |
| "             | $\frac{5624}{1}$ | Fig'd.            | <b>Mya</b> Linn.<br><i>arenaria</i> (Linn)...Holmes.       | " "         | ..... | 55    | 8     | 15                |
| "             | $\frac{5625}{1}$ | Fig'd.            | <b>Noëtia</b> Gray.<br><i>ponderosa</i> (Say)...Holmes.    | " "         | ..... | 21    | 4     | 4, 4a             |
| Pleist.       | $\frac{5626}{1}$ | Fig'd.            | <b>Nucula</b> Lamarck.<br><i>acuta</i> .....               | .....       | ..... | ..... | ..... | .....             |
|               |                  |                   | <i>proxima</i> (Say)...Holmes.                             | P. P. S. C. | ..... | 17    | 3     | 6                 |
|               |                  |                   | <b>Ostrea</b> Linn.<br><i>fundata</i> .....                | .....       | ..... | ..... | ..... | .....             |
|               |                  |                   | <i>virginiana</i> .....                                    | .....       | ..... | ..... | ..... | .....             |
|               |                  |                   | " var. <i>procyon.</i>                                     | .....       | ..... | ..... | ..... | .....             |
| Pleist ?      | $\frac{5627}{1}$ | Fig'd.            | <i>virginica</i> (Gmel.) Holmes.                           | P. P. S. C. | ..... | 9     | 2     | 9                 |
| "             | $\frac{5627}{2}$ | Type.             | " " "                                                      | " "         | ..... | 11    | 2     | 10                |
| " ?           | $\frac{5628}{1}$ | "                 | " var. <i>procyon.</i> ..Hs.                               | " "         | ..... | 10    | 2     | 9a                |
| Pleist.       | $\frac{5629}{1}$ | Fig'd.            | <b>Pecten</b> Müller.<br><i>dislocatus</i> .....           | .....       | ..... | ..... | ..... | .....             |
|               |                  |                   | <i>gibbus</i> Linn, var.<br><i>dislocatus</i> (Say) Hs.    | P. P. S. C. | ..... | 13    | 2     | 12                |
|               |                  |                   | <b>Pectunculus</b> Lamarck.....                            | .....       | ..... | ..... | ..... | .....             |
|               |                  |                   | <i>carolinensis</i> .....                                  | .....       | ..... | ..... | ..... | .....             |
|               |                  |                   | <b>Peronæa</b> Poli.<br><i>tenta</i> .....                 | .....       | ..... | ..... | ..... | .....             |



| LOCALITY.                                                                                                                                                                                               | REMARKS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Stono River or<br>Simmons' Bluff, S. C.<br>.....                                                                                                                                                        | As <i>Nucula acuta</i> . An average right valve.<br>See <i>Yoldia limatula</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Abbapoola Creek, S. C.<br>.....<br>.....<br>.....                                                                                                                                                       | A left valve.<br>See <i>Divaricella Conradi</i> .<br>" " "<br>" <i>Diplodonta soror</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Simmons' Bluff, S. C.<br>.....<br>Simmons' Bluff, S. C.<br>.....<br>.....<br>.....<br>.....<br>.....                                                                                                    | As <i>Macoma fusca</i> Say. A left valve.<br>See " <i>balthica</i> .<br>As <i>Peronæa tenta</i> . A left valve which has lost part of the umbo.<br><br>See <i>Mulinia lateralis</i> .<br><br>" <i>Venus Mortoni</i> .<br>" " <i>mercenaria</i> , var. <i>notata</i> .<br>" " "<br><br>" <i>Ervilia concentrica</i> .                                                                                                                                                                                                                                                                                                                                                   |
| South Carolina.<br>" "                                                                                                                                                                                  | As <i>Mactra lateralis</i> . The left valve figured.<br>A right valve with the umbo partly gone. Not a left valve as stated<br>in the text.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Simmons' Bluff, S. C.                                                                                                                                                                                   | Two opposite valves, not of the same individual. The left valve<br>has lost its anterior one-third.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Charleston, S. C.<br>.....<br>Simmons' Bluff, S. C.<br>.....<br>.....<br>.....<br>Charleston, ? S. C.<br>Simmons' Bluff, S. C.<br>Charleston, S. C.<br>.....<br>Simmons' Bluff, S. C.<br>.....<br>..... | As <i>Arca ponderosa</i> . Both valves of an adult.<br><br>See <i>Leda acuta</i> .<br>A left valve.<br><br>See <i>Ostrea virginica</i> .<br>" " "<br>" " " var. <i>procyon</i> .<br>As " <i>virginiana</i> Lister. Entire adult.<br>" " <i>fundata</i> , a name which Holmes credits to Say but which<br>has not yet been found in Say's writings. A single valve.<br>As <i>Ostrea virginiana</i> var. <i>procyon</i> . A single valve.<br><br>See <i>Pecten gibbus</i> , var. <i>dislocatus</i> .<br><br>As " <i>dislocatus</i> . A right valve of medium size.<br>Synonym of <i>Glycymeris</i> .<br>See <i>Glycymeris americana</i> .<br><br>" <i>Macoma tenta</i> . |

Class LAMELLIBRANCHIATA—Continued.

| Geol. Subdiv. | Cat. No.         | Type or Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                                       | REFERENCE.  |       |       |       |         |
|---------------|------------------|-------------------|----------------------------------------------------------------------------------|-------------|-------|-------|-------|---------|
|               |                  |                   |                                                                                  | Work.       | Vol.  | P.    | Pl.   | Figs.   |
|               |                  |                   | <b>Peronæoderma</b> Mörch.<br><i>alternata</i> .....                             | .....       | ..... | ..... | ..... | .....   |
| Pleist?       | $\frac{5630}{1}$ | Fig'd.            | <b>Petricola</b> Lamarck.<br><i>dactylus</i> ( <i>Sow.</i> )... <i>Holmes.</i>   | P. P. S. C. | ..... | 39    | 7     | 7       |
|               |                  |                   | <b>Pholas</b> Linn.<br><i>costata</i> .....                                      | .....       | ..... | ..... | ..... | .....   |
|               |                  |                   | <b>Pinna</b> Linn.<br><i>seminuda</i> .....                                      | .....       | ..... | ..... | ..... | .....   |
| Pleist.       | $\frac{5631}{1}$ | Fig'd.            | <b>Pleuromeris</b> Conrad.<br><i>tridentata</i> ( <i>Say</i> )... <i>Holmes.</i> | P. P. S. C. | ..... | 31    | 6     | 8       |
|               |                  |                   | <b>Plicatula</b> Lamarck.<br><i>cristata</i> .....                               | .....       | ..... | ..... | ..... | .....   |
| Pleist?       | $\frac{5632}{1}$ | Fig'd.            | <i>gibbosa</i> ( <i>Lam.</i> )... <i>Holmes.</i>                                 | P. P. S. C. | ..... | 13    | 2     | 13      |
|               |                  |                   | <b>Raëta</b> Gray.<br><i>canaliculata</i> .....<br><i>lineata</i> .....          | .....       | ..... | ..... | ..... | .....   |
| Pleist.       | $\frac{5633}{1}$ | Fig'd.            | <b>Scobina</b> Bayle.<br><i>costata</i> ( <i>Linn.</i> )... <i>Holmes.</i>       | P. P. S. C. | ..... | 58    | 9     | 1       |
|               |                  |                   | <b>Semele</b> Schumacher.<br><i>orbiculata</i> .....                             | .....       | ..... | ..... | ..... | .....   |
| Pleist.       | $\frac{5634}{1}$ | Fig'd.            | <i>proficua</i> ( <i>Pult.</i> )... <i>Holmes.</i>                               | P. P. S. C. | ..... | 51    | 8     | 9       |
|               |                  |                   | <b>Tellidora</b> Mörch.<br><i>Burnetti</i> ( <i>Bd. &amp; Sy.</i> ) <i>Hs.</i>   | " "         | ..... | 48    | 9     | 6-6b    |
| Recent.       | $\frac{5635}{1}$ | "                 | <i>cristata</i> ( <i>Recluz</i> ) <i>Holmes.</i>                                 | " "         | ..... | 47    | 9     | 7-7d    |
| Pleist.       | $\frac{5636}{1}$ | "                 | <i>lunulata</i> .....                                                            | .....       | ..... | ..... | ..... | .....   |
|               |                  |                   | <b>Venus</b> Linn.<br><i>mercenaria</i> ( <i>Lam.</i> )... <i>Hs.</i>            | P. P. S. C. | ..... | 33    | 6     | 11, 11a |
| "             | $\frac{5637}{1}$ | "                 | <i>limatula</i> ,                                                                | " "         | ..... | 34    | 6     | 13      |
| "             | $\frac{5638}{1}$ | "                 | <i>var. notata</i> ( <i>Say</i> ) <i>Hs.</i>                                     | " "         | ..... | 34    | 6     | 12, 12a |
| "             | $\frac{5639}{1}$ | "                 | <i>Mortoni</i> ( <i>Con.</i> )... <i>Holmes.</i>                                 | " "         | ..... | 34    | 6     | 12, 12a |
|               |                  |                   | <b>Yoldia</b> Moller.<br><i>limatula</i> ( <i>Say</i> )... <i>Holmes.</i>        | " "         | ..... | 18    | 3     | 8       |

Class GASTROPODA.

|         |                  |        |                                                                                 |             |       |       |       |       |
|---------|------------------|--------|---------------------------------------------------------------------------------|-------------|-------|-------|-------|-------|
| Pleist? | $\frac{5641}{1}$ | Fig'd. | <b>Acus</b> Humphrey.<br><i>dislocatus</i> ( <i>Say</i> )... <i>Holmes.</i>     | P. P. S. C. | ..... | 70    | 11    | 12    |
|         |                  |        | <b>Adeorbis</b> S. Wood.<br><i>nautiliformis</i> .....                          | .....       | ..... | ..... | ..... | ..... |
| Pleist. | $\frac{5642}{1}$ | Fig'd. | <b>Anachis</b> H. & A. Adams.<br><i>obesa</i> ( <i>Adanson</i> ) <i>Holmes.</i> | P. P. S. C. | ..... | 74    | 12    | 6, 6a |



| LOCALITY.                               | REMARKS.                                                                                                                             |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| .....                                   | See <i>Eurytellina alternata</i> .                                                                                                   |
| South Carolina.                         | A right valve.                                                                                                                       |
| .....                                   | See <i>Scobina costata</i> .                                                                                                         |
| .....                                   | " <i>Atrina rigida</i> .                                                                                                             |
| Simmons' Bluff or<br>Wadmalaw, S. C.    | As <i>Cardita tridentata</i> . The valve which was figured.                                                                          |
| .....                                   | See <i>Plicatula gibbosa</i> .                                                                                                       |
| South Carolina.                         | As " <i>crinata</i> Lam. A single valve.                                                                                             |
| .....                                   | See <i>Labiosa canaliculata</i> .                                                                                                    |
| .....                                   | " " <i>lineata</i> .                                                                                                                 |
| Simmons' Bluff, S. C.                   | As <i>Pholas costata</i> . The two valves of an individual of medium size, lacking the transverse process represented in the figure. |
| .....                                   | See <i>Semele proficua</i> .                                                                                                         |
| Simmons' Bluff, S. C.                   | As " <i>orbiculata</i> Say. Both valves of an individual.                                                                            |
| California.                             | The individual used for the figures.                                                                                                 |
| Simmons' Bluff or<br>St. Andrews, S. C. | As <i>Tellidora lunulata</i> Adams. The two valves assigned to these figures by Prof. Holmes are a trifle too small.                 |
| .....                                   | See <i>Tellidora cristata</i> .                                                                                                      |
| Simmons' Bluff, S. C.                   | As <i>Mercenaria violacea</i> Adams. What is evidently the left valve of the specimen which was figured is present.                  |
| " "                                     | As <i>Mercenaria notata</i> . A right valve.                                                                                         |
| " "                                     | " " <i>Mortoni</i> . A very large individual with greatly thickened valves.                                                          |
| " "                                     | As <i>Leda limatula</i> . A right valve.                                                                                             |
| South Carolina.                         | As <i>Terebra dislocata</i> . Entire, except for the lip being broken.                                                               |
| .....                                   | See <i>Cochliolepis nautiliformis</i> .                                                                                              |
| Simmons' Bluff, S. C.                   | As <i>Columbella ornata</i> Ravenel. Entire. May have come from Cainhoy or Waccamaw.                                                 |

## Class GASTROPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.            | REFERENCE.  |       |       |       |         |
|------------------|------------------|----------------------|---------------------------------------|-------------|-------|-------|-------|---------|
|                  |                  |                      |                                       | Work.       | Vol.  | P.    | Pl.   | Figs.   |
|                  |                  |                      | <b>Buccinum</b> Linn.                 |             |       |       |       |         |
|                  |                  |                      | <i>acutum</i> .....                   | .....       | ..... | ..... | ..... | .....   |
|                  |                  |                      | <i>obsoletum</i> .....                | .....       | ..... | ..... | ..... | .....   |
|                  |                  |                      | <i>trivittatum</i> .....              | .....       | ..... | ..... | ..... | .....   |
|                  |                  |                      | <b>Busycon</b> Bolten.                |             |       |       |       |         |
|                  |                  |                      | <i>canaliculatum</i> .....            | .....       | ..... | ..... | ..... | .....   |
|                  |                  |                      | <i>carica</i> .....                   | .....       | ..... | ..... | ..... | .....   |
|                  |                  |                      | <i>perversum</i> .....                | .....       | ..... | ..... | ..... | .....   |
|                  |                  |                      | <b>Cancellaria</b> Lamarck.           |             |       |       |       |         |
| Pleist.          | $\frac{5643}{1}$ | Fig'd.               | <i>reticulata</i> (Linn) Holmes.      | P. P. S. C. | ..... | 64    | 10    | 6       |
|                  |                  |                      | <i>venusta</i> Hs. (non T. & H.)..... | .....       | ..... | ..... | ..... | .....   |
|                  |                  |                      | <b>Cavolina</b> Gioeni.               |             |       |       |       |         |
| "                | $\frac{5644}{1}$ | Type.                | <i>Tuomeyi</i> .....Holmes.           | " "         | ..... | 60    | 9     | 8-8e    |
|                  |                  |                      | <b>Chrysallida</b> Carpenter.         |             |       |       |       |         |
| Pleist.          | $\frac{5645}{1}$ | Fig'd.               | <i>seminuda</i> (Adams)....Hs.        | " "         | ..... | 86    | 13    | 11-11b  |
|                  |                  |                      | <b>Cochliolepis</b> Stimpson.         |             |       |       |       |         |
| " ?              | $\frac{5646}{1}$ | Type.                | <i>nautiliformis</i> ....Holmes.      | " "         | ..... | 93    | 14    | 8-8b    |
|                  |                  |                      | <b>Columbella</b> Lamarck.            |             |       |       |       |         |
|                  |                  |                      | <i>ornata</i> .....                   | .....       | ..... | ..... | ..... | .....   |
|                  |                  |                      | <b>Crepidula</b> Lamarck.             |             |       |       |       |         |
| Pleist.          | $\frac{5647}{1}$ | Fig'd.               | <i>aculeata</i> (Gmel.)...Holmes.     | P. P. S. C. | ..... | 95    | 14    | 12      |
| "                | $\frac{5648}{1}$ | "                    | <i>convexa</i> (Say)...Holmes.        | " "         | ..... | 95    | 14    | 11      |
|                  |                  |                      | <i>Crypta</i> Humphrey.....           | .....       | ..... | ..... | ..... | .....   |
|                  |                  |                      | <i>aculeata</i> .....                 | .....       | ..... | ..... | ..... | .....   |
|                  |                  |                      | <i>fornicata</i> Hs. (non Linn).....  | .....       | ..... | ..... | ..... | .....   |
|                  |                  |                      | <b>Eulima</b> Risso.                  |             |       |       |       |         |
| Pleist.          | $\frac{5649}{1}$ | Fig'd.               | <i>eborea</i> (Cón.)....Holmes.       | P. P. S. C. | ..... | 88    | 13    | 13      |
|                  |                  |                      | <b>Eupleura</b> H. & A. Adams.        |             |       |       |       |         |
| "                | $\frac{5650}{1}$ | "                    | <i>caudata</i> (Say)....Holmes.       | " "         | ..... | 62    | 10    | 3       |
|                  |                  |                      | <b>Fissurella</b> (Brug.) Lamarck.    |             |       |       |       |         |
|                  |                  |                      | <i>alternata</i> .....                | .....       | ..... | ..... | ..... | .....   |
|                  |                  |                      | <b>Fissuridea</b> Swainson.           |             |       |       |       |         |
| Pleist.          | $\frac{5651}{1}$ | Fig'd.               | <i>alternata</i> (Say)...Holmes.      | P. P. S. C. | ..... | 94    | 14    | 10      |
|                  |                  |                      | <b>Fulgur</b> Montfort.               |             |       |       |       |         |
| "                | $\frac{5652}{1}$ | "                    | <i>canaliculatum</i> (Linn) Hs.       | " "         | ..... | 66    | 11    | 3       |
| "                | $\frac{5653}{1}$ | "                    | <i>carica</i> (Gmel.)....Holmes.      | " "         | ..... | 65    | 11    | 1       |
| "                | $\frac{5654}{1}$ | "                    | <i>perversum</i> (Linn.) Hs.          | " "         | ..... | 65    | 11    | 2       |
|                  |                  |                      | <b>Fusus</b> Lamarck.                 |             |       |       |       |         |
| " ?              | $\frac{5655}{1}$ | Type.                | <i>conus</i> .....Holmes.             | " "         | ..... | 69    | 11    | 7-8a    |
| "                | $\frac{5656}{1}$ | "                    | <i>filiformis</i> .....Holmes.        | " "         | ..... | 69    | 11    | 9, 9a   |
| "                | $\frac{5657}{1}$ | "                    | <i>rudis</i> .....Holmes.             | " "         | ..... | 70    | 11    | 11, 11a |



| LOCALITY.                                                                  | REMARKS.                                                                                                                                                                       |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .....                                                                      | See <i>Nassa acuta</i> .                                                                                                                                                       |
| .....                                                                      | " <i>Ilyanassa irrorata</i> .                                                                                                                                                  |
| .....                                                                      | " <i>Nassa trivittata</i> .                                                                                                                                                    |
| .....                                                                      |                                                                                                                                                                                |
| .....                                                                      | " <i>Fulgur canaliculatum</i> .                                                                                                                                                |
| .....                                                                      | " " <i>carica</i> .                                                                                                                                                            |
| .....                                                                      | " " <i>perversum</i> .                                                                                                                                                         |
| .....                                                                      |                                                                                                                                                                                |
| Simmons' Bluff or<br>Wando River, S. C.<br>.....                           | An individual which had lost its lip before it was imbedded.<br>See <i>Tritonidea cancellaria</i> .                                                                            |
| Simmons' Bluff, S. C.                                                      | Slightly broken on one side. "Probably the young of <i>Cavolina gibbosa</i> Rang." (Dall).                                                                                     |
| Cainhoy, S. C.                                                             | As <i>Odostomia granulatus</i> H. C. Lea. Entire.                                                                                                                              |
| " "                                                                        | As <i>Adeorbis nautiliformis</i> . Part of one whorl is all that remains of the specimen which was figured, but another which is nearly entire is associated with it.          |
| .....                                                                      | See <i>Anachis obesa</i> .                                                                                                                                                     |
| .....                                                                      |                                                                                                                                                                                |
| John's Island,<br>Stono River, S. C.<br>Simmons' Bluff, S. C.<br>.....     | As <i>Crypta aculeata</i> . The broken individual which was figured.<br>" " <i>fornicata</i> Linn. Entire.                                                                     |
| .....                                                                      | Synonym of <i>Crepidula</i> .                                                                                                                                                  |
| .....                                                                      | See <i>Crepidula aculeata</i> .                                                                                                                                                |
| .....                                                                      | " " <i>convexa</i> .                                                                                                                                                           |
| .....                                                                      |                                                                                                                                                                                |
| Simmons' Bluff, S. C.                                                      | Individual with apex and lip gone.                                                                                                                                             |
| " "                                                                        | The lower extremity has been broken off since the figure was made.                                                                                                             |
| .....                                                                      | See <i>Fissuridea alternata</i> .                                                                                                                                              |
| .....                                                                      |                                                                                                                                                                                |
| Simmons' Bluff or<br>Stono River, S. C.                                    | As <i>Fissurella alternata</i> . Entire.                                                                                                                                       |
| .....                                                                      |                                                                                                                                                                                |
| Simmons' Bluff or<br>Wadmalaw Sound, S. C.<br>Simmons' Bluff, S. C.<br>" " | As <i>Busycon canaliculatum</i> . A young shell, strongly beaded.<br>" " <i>carica</i> . The lip is somewhat broken.<br>" " <i>perversum</i> . Entire, except as to the point. |
| .....                                                                      |                                                                                                                                                                                |
| John's Island, S. C.                                                       | Two young individuals, one with broken aperture. Probably <i>Anachis avara</i> Say.                                                                                            |
| Simmons' Bluff, S. C.                                                      | A young shell. Probably <i>Pleurotoma cinera</i> Kurtz & Stimpson.                                                                                                             |
| " "                                                                        | A young shell. Probably <i>Eupleura caudata</i> Say.                                                                                                                           |

## Class GASTROPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                       | REFERENCE.  |       |       |       |         |
|------------------|------------------|----------------------|------------------------------------------------------------------|-------------|-------|-------|-------|---------|
|                  |                  |                      |                                                                  | Work.       | Vol.  | P.    | Pl.   | Figs.   |
| Pleist.          | $\frac{5658}{1}$ | Fig'd.               | <b>Ilyanassa</b> Stimpson.<br><i>irrorata</i> (Con.)...Holmes.   | P. P. S. C. | ..... | 71    | 12    | 1       |
| "                | $\frac{5659}{1}$ | "                    | <b>Littorina</b> de Férussac.<br><i>irrorata</i> (Say) Holmes.   | " "         | ..... | 91    | 14    | 5       |
| "                | $\frac{5660}{1}$ | Type.                | <b>Lonchæus</b> Mörch.<br><i>crenulatus</i> .....Holmes.         | " "         | ..... | 88    | 13    | 14, 14a |
| "                | $\frac{5661}{1}$ | Fig'd.               | <b>Mangilia</b> Risso.<br><i>cerina</i> (K. & S.) Holmes.        | " "         | ..... | 77    | 12    | 9, 9a   |
| "                | $\frac{5662}{1}$ | "                    | <b>Marginella</b> Lamarck.<br><i>limatula</i> (Con.)...Holmes.   | " "         | ..... | 78    | 12    | 12      |
| "                | $\frac{5663}{1}$ | Type.                | <b>Mitra</b> Lamarck.<br><i>wandoënsis</i> .....Holmes.          | " "         | ..... | 77    | 12    | 10, 10a |
| "                | $\frac{5664}{1}$ | Fig'd.               | <b>Nassa</b> Lamarck.<br><i>acuta</i> (Say).....Holmes.          | " "         | ..... | 72    | 12    | 3       |
| "                | $\frac{5665}{1}$ | "                    | <i>trivittata</i> (Say)...Holmes.                                | " "         | ..... | 72    | 12    | 2       |
|                  |                  |                      | <b>Natica</b> (Adanson) Scopoli.<br><i>duplicata</i> .....       | .....       | ..... | ..... | ..... | .....   |
| Pleist.          | $\frac{5666}{1}$ | Fig'd.               | <b>Neverita</b> Risso.<br><i>duplicata</i> (Say)..Holmes.        | P. P. S. C. | ..... | 80    | 12    | 14      |
|                  |                  |                      | <b>Obeliscus</b> Humphrey.<br><i>crenulatus</i> .....            | .....       | ..... | ..... | ..... | .....   |
|                  |                  |                      | <b>Odostomia</b> Fleming.<br><i>granulatus</i> .....             | .....       | ..... | ..... | ..... | .....   |
|                  |                  |                      | <b>Pleurotoma</b> Lamarck.<br><i>cerina</i> .....                | .....       | ..... | ..... | ..... | .....   |
|                  |                  |                      | <b>Porcellana</b> Adanson.<br><i>limatula</i> .....              | .....       | ..... | ..... | ..... | .....   |
| Pleist.          | $\frac{5667}{1}$ | Fig'd.               | <b>Scalaria</b> Lamarck.<br><i>angulata</i> (Say)...Holmes.      | P. P. S. C. | ..... | 89    | 14    | 2       |
| Pleist.          | $\frac{5668}{1}$ | Fig'd.               | <i>clathrus</i> Hs. (non Linn).                                  | .....       | ..... | ..... | ..... | .....   |
| "                | $\frac{5669}{1}$ | "                    | <i>lineata</i> (Say).....Holmes.                                 | P. P. S. C. | ..... | 90    | 14    | 3       |
| "                | $\frac{5670}{1}$ | "                    | <i>multistriata</i> (Say) Holmes.                                | " "         | ..... | 90    | 14    | 4       |
| "                | $\frac{5671}{1}$ | "                    | <i>Sayana</i> (Dall)...Holmes.                                   | " "         | ..... | 89    | 14    | 1       |
| "                | $\frac{5671}{1}$ | "                    | <b>Strombus</b> Linn.<br><i>pugilis</i> (Linn)...Holmes.         | " "         | ..... | 61    | 10    | 1       |
|                  |                  |                      | <b>Terebra</b> Bruguière.<br><i>dislocata</i> .....              | .....       | ..... | ..... | ..... | .....   |
| Pleist.          | $\frac{5672}{1}$ | Fig'd.               | <b>Tornatina</b> A. Adams.<br><i>canaliculata</i> (Say)....Hs.   | P. P. S. C. | ..... | 78    | 12    | 11, 11a |
| "                | $\frac{5673}{1}$ | "                    | <b>Tritonidea</b> Swainson.<br><i>cancellaria</i> (Con.) Holmes. | " "         | ..... | 64    | 10    | 7       |



| LOCALITY.                              | REMARKS.                                                                          |
|----------------------------------------|-----------------------------------------------------------------------------------|
| Simmons' Bluff, S. C.                  | As <i>Buccinum obsoletum</i> Say. The lip was missing before the figure was made. |
| “ “                                    | A somewhat weathered individual. May have come from Wadmalaw or Cainhoy.          |
| “ “                                    | As <i>Obeliscus crenulatus</i> . Entire.                                          |
| “ “                                    | “ <i>Pleurotoma cerinum</i> . Entire.                                             |
| “ “                                    | “ <i>Porcellana limatula</i> . Entire.                                            |
| Wando River, S. C.                     | “ <i>Volutomitra wandoënsis</i> . Entire, somewhat worn.                          |
| Simmons' Bluff, S. C.                  | “ <i>Buccinum acutum</i> . Entire, very perfect.                                  |
| “ “                                    | “ “ <i>trivittatum</i> . A very perfect individual.                               |
| .....                                  | See <i>Neverita duplicata</i> .                                                   |
| Simmons' Bluff, S. C.                  | As <i>Natica duplicata</i> . Entire.                                              |
| .....                                  | See <i>Lonchæus crenulatus</i> .                                                  |
| .....                                  | “ <i>Chrysallida seminuda</i> .                                                   |
| .....                                  | “ <i>Mangilia cerina</i> .                                                        |
| .....                                  | “ <i>Marginella limatula</i> .                                                    |
| Simmons' Bluff, S. C.                  | Entire.                                                                           |
| .....                                  | See <i>Scalaria Sayana</i> .                                                      |
| Simmons' Bluff, S. C.                  | Entire.                                                                           |
| “ “                                    | The lower four whorls of the individual represented in the figure.                |
| “ “                                    | As <i>Scalaria clathrus</i> Linn. Entire.                                         |
| “ “                                    | The specimen which was referred to this figure by Prof. Holmes.                   |
| .....                                  | See <i>Acus dislocatus</i> .                                                      |
| Simmons' Bluff or John's Island, S. C. | As <i>Volvaria canaliculata</i> . Entire.                                         |
| Simmons' Bluff, S. C.                  | “ <i>Cancellaria venusta</i> T. & H. Entire adult of average size.                |

Class GASTROPODA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                 | REFERENCE.  |       |       |       |        |
|------------------|------------------|----------------------|------------------------------------------------------------|-------------|-------|-------|-------|--------|
|                  |                  |                      |                                                            | Work.       | Vol.  | P.    | Pl.   | Figs.  |
| Pleist           | $\frac{5674}{1}$ | Fig'd.               | <b>Turbonilla</b> Risso.                                   |             |       |       |       |        |
|                  |                  |                      | <i>acicula</i> .....                                       | .....       | ..... | ..... | ..... | .....  |
|                  |                  |                      | <i>caroliniana</i> .....                                   | .....       | ..... | ..... | ..... | .....  |
|                  |                  |                      | <i>interrupta</i> ( <i>Totten</i> )... <i>Hs.</i>          | P. P. S. C. | ..... | 86    | 13    | 10-10b |
|                  |                  |                      | <i>nivea</i> ( <i>Stimpson</i> ) <i>Holmes.</i>            | " "         | ..... | 83    | 13    | 3-3b   |
| " ?              | $\frac{5676}{1}$ | "                    | <i>reticulata</i> ( <i>C. B. Adams</i> )<br><i>Holmes.</i> | " "         | ..... | 86    | 13    | 9-9b   |
|                  | $\frac{5677}{1}$ | Fig'd.               | <b>Volutomitra</b> Gray.                                   |             |       |       |       |        |
|                  |                  |                      | <i>wandoënsis</i> .....                                    | .....       | ..... | ..... | ..... | .....  |
|                  |                  |                      | <b>Volva</b> Bolten.                                       |             |       |       |       |        |
|                  |                  |                      | <i>acicularis</i> ( <i>Lam.</i> ) <i>Holmes.</i>           | " "         | ..... | 79    | 12    | 13     |
|                  |                  |                      | <b>Volvaria</b> Lamarck.                                   |             |       |       |       |        |
|                  |                  |                      | <i>canaliculata</i> .....                                  | .....       | ..... | ..... | ..... | .....  |

Subkingdom ARTHROPODA.

|          |                  |        |                                                  |             |       |       |       |       |
|----------|------------------|--------|--------------------------------------------------|-------------|-------|-------|-------|-------|
| Pleist.  | $\frac{5678}{1}$ | Fig'd. | <b>Balanus</b> Lister.                           |             |       |       |       |       |
|          |                  |        | <i>eburneus</i> ( <i>Gould</i> ).... <i>Hs.</i>  | P. P. S. C. | ..... | 7     | 2     | 5, 5a |
| " ?      | $\frac{5679}{1}$ | "      | <b>Guaia</b> Milne-Edwards.                      |             |       |       |       |       |
|          |                  |        | <i>punctata</i> ( <i>Brown</i> ) <i>Holmes.</i>  | " "         | ..... | 8     | 2     | 8     |
|          |                  |        | <i>Guia</i> <i>Hs.</i> (non Milne-Edw.)          | .....       | ..... | ..... | ..... | ..... |
| Pleist ? | $\frac{5680}{1}$ | Fig'd. | <b>Pseudocarcinus</b> M.-Edw.                    |             |       |       |       |       |
|          |                  |        | <i>mercenarius</i> ( <i>Say</i> ) <i>Holmes.</i> | P. P. S. C. | ..... | 8     | 2     | 7     |

Subkingdom VERTEBRATA.

|          |                  |        |                                                   |             |       |     |    |     |
|----------|------------------|--------|---------------------------------------------------|-------------|-------|-----|----|-----|
| Pleist ? | $\frac{5681}{1}$ | Type.  | <b>Ischyrisa</b> Leidy.                           |             |       |     |    |     |
|          |                  |        | <i>mira</i> ..... <i>Leidy.</i>                   | P. P. S. C. | ..... | 120 | 25 | 3-8 |
| "        | $\frac{5682}{1}$ | Fig'd. | <b>Pastinaca</b> Gesner.                          |             |       |     |    |     |
|          |                  |        | <i>hastata</i> ( <i>Dekay</i> )?... <i>Leidy.</i> | " "         | ..... | 119 | 27 | 1   |
| "        | $\frac{5683}{1}$ | "      | <b>Trichiurus</b> Linn.                           |             |       |     |    |     |
|          |                  |        | <i>lepturus</i> ( <i>Linn</i> ).... <i>Leidy.</i> | " "         | ..... | 121 | 25 | 2   |
| "        | $\frac{5684}{1}$ | Type.  | <b>Xiphias</b> Linn.                              |             |       |     |    |     |
|          |                  |        | <i>robustus</i> ..... <i>Leidy.</i>               | " "         | ..... | 119 | 27 | 3-5 |

Class REPTILIA.

|         |                  |        |                                                            |             |       |     |    |         |
|---------|------------------|--------|------------------------------------------------------------|-------------|-------|-----|----|---------|
| Pleist. | $\frac{5685}{1}$ | Fig'd. | <b>Alligator</b> Cuvier.                                   |             |       |     |    |         |
|         |                  |        | <i>mississippiensis</i> ( <i>Daudin</i> )<br><i>Leidy.</i> | P. P. S. C. | ..... | 122 | 27 | 7       |
| "       | $\frac{5686}{1}$ | "      | <b>Testudo</b> Linn.                                       |             |       |     |    |         |
|         |                  |        | <i>sp</i> ..... <i>Leidy.</i>                              | " "         | ..... | 122 | 28 | 1, 2, 4 |



| LOCALITY.                           | REMARKS.                                                                                    |
|-------------------------------------|---------------------------------------------------------------------------------------------|
| .....                               | See <i>Turbonilla interrupta</i> .                                                          |
| .....                               | “ “ <i>reticulata</i> .                                                                     |
| Cainhoy, S. C.                      | As type of <i>Turbonilla acicula</i> Hs. Entire, except for broken lip.                     |
| John's Island, S. C.                | A very perfect indiv. May have come from Cainhoy or Simmons' Bluff.                         |
| Cainhoy, S. C.                      | As type of <i>Turbonilla caroliniana</i> Holmes. Individual with point of aperture missing. |
| .....                               | See <i>Mitra wandoënsis</i> .                                                               |
| Simmons' Bluff or Charleston, S. C. | Entire individual.                                                                          |
| .....                               | See <i>Tornatina canaliculata</i> .                                                         |

Class CRUSTACEA.

|                       |                                                                                          |
|-----------------------|------------------------------------------------------------------------------------------|
| Simmons' Bluff, S. C. | A specimen larger than the average. May have come from Wadmawlaw Sound or John's Island. |
| Charleston, S. C.     | One joint of a claw.                                                                     |
| .....                 | Misprint for <i>Guaia</i> , q. v.                                                        |
| South Carolina.       | Part of the fragment of claw represented.                                                |

Class PISCES.

|                                       |                                                                                                    |
|---------------------------------------|----------------------------------------------------------------------------------------------------|
| Darlington, S. C.                     | Two teeth.                                                                                         |
| Simmons' Bluff, Yonge's Island, S. C. | Part of a spine.                                                                                   |
| Simmons' Bluff, S. C.                 | Two fragmentary teeth.                                                                             |
| Ashley River, S. C.                   | Extremity of an upper jaw and another fragment, the originals of figs. 3 and 4 belonging together. |

|                     |                                                                                                                         |
|---------------------|-------------------------------------------------------------------------------------------------------------------------|
| Ashley River, S. C. | A medium sized and a small tooth. From the Ashley beds.                                                                 |
| “ “                 | Three fragments as figured, except that the original of Fig. 1 seems to have lost one corner since the figure was made. |





| LOCALITY.            | REMARKS.                                                                                                                                              |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ashley River, S. C.  | Two molar teeth.                                                                                                                                      |
| " "                  | Two upper molar teeth.                                                                                                                                |
| " "                  | Three molar teeth.                                                                                                                                    |
| " "                  | Small fragment of an incisor.                                                                                                                         |
| John's Island, S. C. | Fragment of jaw which has lost the tooth represented in the figure.<br>From Doctor's Swamp.                                                           |
| Texas.               | The practically entire tooth which is represented, somewhat fore-shortened, on the plate.                                                             |
| Ashley River, S. C.  | The inner portion of a tooth.                                                                                                                         |
| " "                  | Nearly entire tooth. This is the specimen which E. D. Cope erroneously selected as being the type of <i>Equus fraternus</i> Leidy, without seeing it. |
| " "                  | Two teeth which are assigned to this species on account of their agreement with the original of fig. 26, same plate.                                  |
| Natchez, Miss.       | Two lower molars.                                                                                                                                     |
| John's Island, S. C. | An upper molar with one angle gone. From Doctor's Swamp.                                                                                              |
| Goose Creek, S. C.   | Part of an upper molar. Locality was 12 miles from Charleston.                                                                                        |
| Ashley River, S. C.  | A tooth assigned to this species on account of its agreement with fig. 23, same plate.                                                                |
| Brunswick Canal, Ga. | A molar tooth which has lost part of the enamel.                                                                                                      |
| Charleston, S. C.    | A molar.                                                                                                                                              |
| Florida.             | A molar.                                                                                                                                              |
| Ashley River, S. C.  | Two incisors and a fragment of jaw retaining two molar teeth.                                                                                         |
| " "                  | Fragment of an incisor, and three lower molars.                                                                                                       |
| " "                  | A lower molar tooth.                                                                                                                                  |
| " "                  | An imperfect tooth.                                                                                                                                   |

Class MAMMALIA—Continued.

| Geol.<br>Subdiv. | Cat.<br>No.      | Type or<br>Fig'd Sp. | GENUS, SPECIES AND AUTHOR.                                            | REFERENCE.  |       |       |        |           |
|------------------|------------------|----------------------|-----------------------------------------------------------------------|-------------|-------|-------|--------|-----------|
|                  |                  |                      |                                                                       | Work.       | Vol.  | P.    | Pl.    | Figs.     |
| Pleist ?         | <u>5699</u><br>1 | Fig'd.               | <b>Procyon</b> Storr.<br>lotor ( <i>Storr</i> )..... <i>Leidy</i> .   | P. P. S. C. | ..... | 115   | 23     | I         |
| "                | <u>5700</u><br>1 | Type.                | <b>Squalodon</b> Grateloup.<br>Tiedemani..... <i>Allen</i> .          | A. M. N. H. | 2     | 35    | 6      | 2-4       |
| "                | <u>5700</u><br>2 | "                    | " ..... "                                                             | " "         | 2     | 35    | 5<br>6 | I, 2<br>I |
| "                | <u>5701</u><br>1 | Fig'd.               | <b>Sus</b> Linn.<br>scrofa ( <i>Linn.</i> )..... <i>Leidy</i> .       | P. P. S. C. | ..... | 109   | 19     | 4, 5      |
| "                | <u>5702</u><br>1 | "                    | <b>Tapirus</b> Brisson.<br>americanus ( <i>Linn.</i> ) <i>Leidy</i> . | " "         | ..... | 106   | 17     | 3         |
| "                | <u>5703</u><br>1 | "                    | Genus?<br>species ?..... <i>Leidy</i> .                               | " "         | ..... | ..... | 24     | 3         |



| LOCALITY.           | REMARKS.                                                                                                    |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| Ashley Ferry, S. C. | The upper part of a lower molar.                                                                            |
| Ashley River, S. C. | A part of the left ramus. The portion of the right ramus mentioned on page 38 of the paper is present also. |
| Charleston, S. C.   | The specimen as described and figured. Dredged from the Wando River.                                        |
| Ashley River, S. C. | A large molar tooth. Thought by Leidy not to be a true fossil.                                              |
| " "                 | Part of the crown of an upper molar tooth. From the Ashley beds.                                            |
| " "                 | An undetermined phalanx.                                                                                    |





## ADDENDA ET CORRIGENDA.

Page 59, line 13 from bottom. Instead of "S." read "C."

Page 62, last line. Instead of the ditto marks read "Type", and instead of "55," in column of page references, read "58."

Page 69, line 13 from bottom. Instead of "*Dalmaia*" read "*Dalmania*."

Page 121, line 17 from bottom. Instead of "*Crytonella*" read "*Cryptonella*."

Pages 146 and 147.

**Spirifer** plicatellus (*Linn.*) *Hall*, St. G. N. Y., Vol. 2, pl. 51, figs. 6-8, 28. *Hall & Clarke*, Pal. N. Y., Vol. 8, pt. 2, p. 9, pl. 21, figs. 6-8, 28. Gothland, Sweden. Silurian system. Cat. No.  $\frac{5244}{1}$ . Fig'd Sp. Four entire individuals, fig. 28 not having been made from the original of one of the others. The original of fig. 6 did not come from the same locality with the others.

Pages 156 and 157.

Page 156, line 5. Instead of "pl. 53, figs. 3, 10" read "pl. 52, fig. 10" and "pl. 53, fig. 3."

**Cardiola** Broderip.

**Cardiola** fluctuans (*Barrande*) *Hall*, Pal. N. Y., Vol. 5, pt. 1, pl. 70, fig. 1, pl. 94, fig. 23. As *Cardiola* sp., *Hall*, Pal. N. Y., Vol. 5, pt. 1, Pl. & Ex., p. 70, fig. 1. Bohemia. Silurian system. Cat. No.  $\frac{5245}{1}$ . Fig'd Sp. A well-preserved right valve, imbedded.

Page 183, line 8. Instead of "*Delmanites*" read "*Dalmanites*."

Page 190, line 22. Instead of "*Bronguiart*" read "*Brongniart*."

Page 194, line 4. Instead of "*Lamarck*" read "Lamarck."

Page 205, line 11 from bottom. Instead of "*Comarotæchia*" read "*Camarotæchia*."

Page 224, line 10. Strike out "47" in column under "Figs."

Page 228, line 21 from bottom. Instead of "9-15" read "9-11, 13-15", in column under "Figs."

Page 251, line 9 from bottom. Instead of "portion" read "portions."

Page 268, line 33. Opposite "**Conocardium** concinnum" insert the reference, "pl. 68, figs. 26, 27."

Page 272, 3rd column, line 11. Instead of "Fig'd Sp. and G. T." read "Gen. and Sp. Type."

Page 284, 9th column, line 16. Instead of "1-3" read "1, 3."

Pages 286 and 287.

**Megalodon** J. Sowerby.

**Megalodon** cucullatus (*Goldfuss*) *Hall*, Pal. N. Y., Vol. 5, pt. 1, pl. 52, fig. 9. Paffrath, Germany. Devonian system. Cat. No.  $\frac{5246}{1}$ . The umbonal portion of a left valve.

- Page 294, line 1. After "**Nuculites** Conrad" insert "*Continued.*"
- Page 303, line 8. Instead of "*Gosseletia*" read "*Gosselettia*."
- Page 308, 3d column, line 8 from bottom. Instead of "Fig'd Sp. and G. T." read "Gen. & Sp. Type."
- Page 316, line 27. Instead of "**Orthonychia**" read "*Orthonychia*."
- Page 350, lines 9, 14 and 16. Insert "Type" after the Cat. No.
- Page 350, line 15 from bottom. Instead of "deforme" read "*deforme*."

## Pages 362 and 363.

**Zaphrentis** spinulifera *Hall*, Geol. Ia., Vol. 1, pt. 2, p. 650, pl. 22, figs. 1a, b. Warsaw, Ill. Warsaw group. Cat. No.  $\frac{5705}{1}$ . Nearly entire.

On line with "Class CRINOIDEA" insert "Subkingdom ECHINODERMATA."

Page 365, line 11 from bottom. Instead of "*Actocrinus*" read "*Actino-crinus*."

## Pages 370 and 371.

**Pentremites** conoideus *Hall*, Geol. Ia., Vol. 1, pt. 2, p. 655, pl. 22, figs. 9, 10. Spergen Hill, Ind. St. Louis Group. Cat. No.  $\frac{5051}{1}$ . Type. An entire body.

**Pentremites** longicostalis *Hall*, Ia. Sup., p. 85. Warsaw, Ill. Warsaw Group. Cat. No.  $\frac{5706}{1}$ . Type. Two fragments, imbedded together.

**Pentremites** cherokeus (*Troost*) *Hall*, Geol. Ia., Vol. 1, pt. 2, p. 691, pl. 25, figs. 12a-c. Chester, Ill. Chester Group. Cat. No.  $\frac{5707}{1}$ . Fig'd Sp. An entire body.

**Pentremites** Godoni (*Defrance*) *Hall*, Geol. Ia., Vol. 1, pt. 2, p. 692, pl. 25, figs. 13a, b. Chester, Ill. Chester Group. Cat. No.  $\frac{5708}{1}$ . Fig'd Sp. An entire body.

**Pentremites** symmetricus *Hall*, Geol. Ia., Vol. 1, pt. 2, p. 694, pl. 25, fig. 14. Crittenden County, Ky. Chester Group. Cat. No.  $\frac{5709}{1}$ . Type. An entire body.

## Pages 372 and 373.

**Archimedes** laxa *Hall*, as *Fenestella* (*Archimedes*) *laxa* Hall, A. A. A. S., Vol. 10, pt. 2, p. 178. Chester, Ill. Chester Group. Cat. No.  $\frac{5710}{1}$ . Type. Fragment 55 mm. long, imbedded.

**Archimedes** Meekana *Hall*, as *Fenestella* (*Archimedes*) *Meekana* Hall, A. A. A. S., Vol. 10, pt. 2, p. 178. Kaskaskia, Ill. Chester Group. Cat. No.  $\frac{5711}{1}$ . Type. Fragment 50 mm. long, imbedded.

|                                                           |                                     |
|-----------------------------------------------------------|-------------------------------------|
| <i>Fenestella</i> ( <i>Archimedes</i> ) <i>laxa</i> ..... | See <i>Archimedes laxa</i> .        |
| " " <i>Meekana</i> .....                                  | See <i>Archimedes Meekana</i> .     |
| " ( <i>Lyropora</i> ) <i>lyra</i> .....                   | See <i>Lyropora lyra</i> .          |
| " " <i>quincuncialis</i> .....                            | See <i>Lyropora quincuncialis</i> . |
| " " <i>subquadrans</i> .....                              | See <i>Lyropora subquadrans</i> .   |



**Lyropora** *lyra* Hall, as *Fenestella* (*Lyropora*) *lyra* Hall, A. A. A. S., Vol. 10, pt. 2, p. 179. Chester, Ill. Chester Group. Cat. No.  $\frac{5712}{1}$ . Gen. and Sp. Type. Two fragments.

**Lyropora** *quincuncialis* Hall, as *Fenestella* (*Lyropora*) *quincuncialis* Hall, A. A. A. S., Vol. 10, pt. 2, p. 180. Chester, Ill. Chester Group. Cat. No.  $\frac{5713}{1}$ . Type. Two large fronds, imbedded separately, and two fragments.

**Lyropora** *subquadrans* Hall, as *Fenestella* (*Lyropora*) *subquadrans* Hall, A. A. A. S., Vol. 10, pt. 2, p. 180. Chester, Ill. Chester Group. Cat. No.  $\frac{5714}{1}$ . Type. Two fragments, imbedded separately.

*Athyris sublamellosa*.....See *Cleiothyris Roissyi*.

Pages 374 and 375.

**Cleiothyris** *Roissyi l'Éveillé*, as a type of *Athyris sublamellosa* Hall, Geol. Ia., Vol. 1, pt. 2, p. 702, pl. 27, figs. 1a-c. Chester Group. Crittenden County, Ky. Cat. No.  $\frac{5715}{1}$ . Fig'd Sp. An entire individual.

Pages 394 and 395.

**Mytilus** Linn.

**Mytilus** *occidentalis*.....See *Mytilarca occidentalis*.

Page 410, line 4 from bottom. Instead of "**Protëus**" read "**Proëtus**."

Pages 412 and 413.

**Derbya?** *biloba* Hall, as *Streptorhynchus biloba* Hall, St. G. N. Y., Vol. 2, pl. 41, figs. 4, 5. Hall & Clarke, Pal. N. Y., Vol. 8, pt. 1, p. 350, pl. 11, figs. 4, 5. Given a verbal description and referred provisionally to the genus *Derbya*. Winterset, Iowa. Coal Measures. Cat. No.  $\frac{5716}{1}$ . Type. An entire individual.

Under *Lamellibranchiata* insert:

**Astartella** Hall.

**Astartella** *vera* Hall, Geol. Ia., Vol. I, pt. 2, p. 715, pl. 29, figs. 1a-c. Rush Creek, Ind. Coal Measures. Cat. No.  $\frac{5717}{1}$ . Gen. and Sp. Type. A right valve and an entire individual.

**Dolabra** McCoy.

**Dolabra** *alpina*.....See *Schizodus alpinus*.

**Schizodus** King.

**Schizodus** *alpinus* Hall, as *Dolabra? alpina* Hall, Geol. Ia., Vol. I, pt. 2, p. 716, pl. 29, fig. 2. Alpine Dam, Des Moines River, Iowa. Coal Measures. Cat. No.  $\frac{5718}{1}$ . Type. A left valve imbedded.

Page 413, line 13. Instead of the query read "Wabash cut-off, Posey Co., Ind.," and to the remark add "The specimen is a good *Productus Rogersi*."

Page 420. The genus **Corbula** is out of order.

Page 426, line 7. Instead of "Stoliczke" read "Stoliczka."

Pages 428 and 429. After "**Fusus tenuilineatus**" insert "**Gladius cheyennensis**.....See *Cryptorhytis cheyennensis*."

Pages 434 and 435.

**Helicoceras** *Stevensoni* Whitfield, Bul. A. M. N. H., Vol. 14, p. 218, pl. 29, 30. Beaver Creek, Wyoming. Fort Pierre group. Cat. No.  $\frac{5719}{1}$ . Fig'd Sp. The specimen as described.

Page 450, line 18. Instead of "**Protocardia**" read "**Protocardium**."

#### NOTES.

The new species described in White and Whitfield's paper on the Kinderhook fossils at Burlington, Iowa, Proceedings of the Boston Society of Natural History, Vol. 8, pp. 291-306, 1862, were founded on specimens from both the Hall and the White collections, and no figures were published at the time; see second paragraph on p. 289 of the geological portion of the article cited. Professor White's collection was afterwards sold to the University of Michigan, and that of Professor Hall to the American Museum of Natural History. This accounts for the fact that while some types of certain species are in this Museum and are therefore entered in this Catalogue, other types of the same species are in the collections of the University of Michigan, and have been quoted from there by Dr. Stuart Weller in his paper on the Fauna of the Chonopectus sandstone at Burlington, Iowa, in Trans. Acad. Sci., St. Louis, Vol. 10, pp. 57-129, pl. 1-9, 1900.

Page 418. **Caprinella**. D'Orbigny proposed this name in 1847 (vid. Paléont. Franc., Terr. Cret., t. 4, p. 189) to take the place of *Ichthyosarcolithes* Desmarests, which he discarded as barbarous and inapplicable to a genus of fossil shells.



# ABBREVIATIONS USED IN PART IV WHICH HAVE NOT BEEN EXPLAINED IN PRECEDING PARTS.

## GEOLOGICAL SUBDIVISIONS.

|         |                                        |
|---------|----------------------------------------|
| C. M.   | Coal Measures.                         |
| CHEST.  | Chester.                               |
| CLAIB.  | Claiborne.                             |
| CRET.   | Cretaceous.                            |
| EOC.    | Eocene.                                |
| F. H.   | Fox Hills=Cretaceous No. 5 of M. & H.  |
| FT. B.  | Ft. Benton=Cretaceous No. 2 of M. & H. |
| FT. P.  | Ft. Pierre=Cretaceous No. 4 of M. & H. |
| KEOK.   | Keokuk.                                |
| KIND.   | Kinderhook.                            |
| L. M.   | Lower Marls (Cretaceous).              |
| M. M.   | Middle Marls (Cretaceous).             |
| MIOC.   | Miocene.                               |
| PLEIST. | Pleistocene.                           |
| PLIOC.  | Pliocene.                              |
| RIPL.   | Ripley.                                |
| ST. L.  | St. Louis.                             |
| U. M.   | Upper Marls (Cretaceous).              |
| WAV.    | Waverly.                               |

## AUTHORS' NAMES.

|             |                       |
|-------------|-----------------------|
| BD. & SY.   | Broderip & Sowerby.   |
| C. H. H.    | Charles H. Hitchcock. |
| DILLW.      | Dillwyn.              |
| GMEL.       | Gmelin.               |
| H. & M.     | Hall & Meek.          |
| HEILP.      | Angelo Heilprin.      |
| HS.         | F. S. Holmes.         |
| K. & S.     | Kurtz & Stimpson.     |
| L. & C.     | Lyon & Casseday.      |
| LESQ.       | Leo Lesquereux.       |
| LONS.       | Lonsdale.             |
| M. & H.     | Meek & Hayden.        |
| MCC.        | J. H. McChesney.      |
| MORT.       | S. G. Morton.         |
| N. & O.     | Norwood & Owen.       |
| OW. & SH.   | Owen & Shumard.       |
| PULT.       | Pulteney.             |
| RAV.        | Edmund Ravenel.       |
| SHUM.       | B. F. Shumard.        |
| STERN.      | Sternberg.            |
| T. & H.     | Tuomey & Holmes.      |
| W. & ST. J. | White & St. John.     |
| W. & W.     | White & Whitfield.    |
| WINCH.      | Alexander Winchell.   |
| SOL.        | Solander.             |

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## INDEX TO VOLUME XI.

[Generic names, only, are indexed. Heavy-faced type indicates references to the genera adopted; plain type indicates cross-references and synonyms.]

- ABRA, **462**.  
 Acambona, **372**.  
 Acanthocrinus, **198**.  
 Acervularia, **192**, 193.  
 Acidaspis, **66**, 69, **178**, 338, 339.  
 Acmaea, **426**, 427.  
 Acroculia, 162, 165, 167, 308, 321.  
 Acrogenia, **200**.  
 Actæon, **426**, **452**, 457.  
 Actæonina, **426**.  
 Acteon, 431.  
 Actinoceras, **58**, 61, **170**, 173.  
 Actinocrinus, 24, 27, 88, 97, 196,  
     197, **362**, 363, 365, 367, 369,  
     371.  
 Actinodesma, 262, 277.  
 Actinopteria, **156**, 157, 161, **262**,  
     263, 265, 293, 305, 351.  
 Acus, **468**, 473.  
 Adeorbis, 468, 471.  
 Æchmina, **176**, 177.  
 Afer, **426**, 427, 429.  
 Agaricocrinus, **362**, 363, **364**, 365.  
 Agelacrinus, **26**, 27.  
 Aglaspis, **14**.  
 Agnostus, **6**, 11.  
 Akera, **426**.  
 Alligator, **474**.  
 Alveolites, 80, 101.  
 Amauropsis, **426**, 431.  
 Ambocoelia, **202**, 203, 231, 233,  
     255.  
 Ambonychia, **42**, 43, 44, 45, **156**.  
 Ammonites, **432**, 435.  
 Amnigenia, **262**, 351.  
 Amoria, **458**.  
 Amphicoelia, **156**, 157.  
 Amphidetus, **442**.  
 Amphigenia, **202**.  
 Amphigraptus, **18**, 23.  
 Amphion, **6**.  
 Amphistrophia, **112**, 113, 125, 127,  
     149, 151, 153, **188**.  
 Amphoracrinus, 363, **364**, 365.  
 Amplexus, 81, **192**, 195.  
 Ampullina, **430**.  
 Amussium, **416**, 444, 449.  
 Anachis, **468**, 471.  
 Anastrophia, **112**, 113, 137.  
 Anatina, 156, 159, **416**.  
 Ancyloceras, 434, 435.  
 Angelina, 6, 13.  
 Anodontopsis, **156**, 161.  
 Anomalocystites, **96**, **198**.  
 Anomia, **444**, 445, **462**, 463.  
 Anthraconectes, 415.  
 Anthracopupa, **414**.  
 Apeibopsis, **438**.  
 Aphrodina, **418**, 421.  
 Apioceras, 329.  
 Apiocystites, **96**.  
 Aploceras, 328, 329.  
 Apollon, 452, 455.  
 Arachnocrinus, **196**, 197.  
 Arca, 418, 427, 444, 447, 451, 462,  
     463, 465, 467.  
 Archæocidaris, **370**.  
 Archæopteris, **190**, 191.  
 Archimedes, **372**, 373, **482**.  
 Architectonica, 452, 457.  
 Arcopagia, **418**.  
 Arenicolites, **174**, 177.  
 Arges, 178, 185.  
 Argina, **462**, 463.  
 Arionellus, **6**.  
 Aristolochia, **438**.  
 Arthropycus, 76, 77.  
 Asaphis, **444**, 451. [338, 341.  
 Asaphus, **66**, 69, 71, 178, 181, 185,  
 Aspidocrinus, **88**.  
 Astarte, 264, 275, **444**, 462, 465.  
 Astartella, **483**.  
 Asterias, 24, 25.  
 Asterosteus, **348**.  
 Astræa, 442, 443, 462, 463.  
 Astrangia, **442**, 443, **462**, 463.  
 Astrocerium, **80**, 81, 87.  
 Astylospongia, **78**, 79.  
 Athyris, **114**, 115, **202**, **204**, 205,  
     215, 255, **372**, 375, 383, 387, 481.  
 Atops, 6, 13.  
 Atrina, **462**, 469.  
 Atrypa, 28, 31, 37, 39, 41, 43,  
     **114**, 115, 119, 121, 125, 141,  
     155, 188, **204**, 205, **206**, 207,  
     209, 223, 229, 233, 245, 261.  
 Atrypina, **114**, 115, **116**, 121, 127.  
 Aulacophyllum, 87.

- Aulopora, 80, 192.  
 Aurinia, 452, 459.  
 Avicula, 4, 5, 44, 49, 156, 157, 159, 161, 163, 263, 264, 267, 283, 287, 301, 418, 462, 463.  
 Aviculopecten, 156, 157, 264, 265, 266, 267, 285, 299, 303, 351, 388, 397.  
 Axinæa, 418, 423, 427.  
  
 BACULITES, 434.  
 Balanocrinus, 88, 93.  
 Balanus, 474.  
 Barrandella, 116, 135, 137.  
 Barrandia, 8, 11, 72.  
 Barrettia, 416.  
 Barroisella, 206.  
 Bathynotus, 8, 9, 13.  
 Bathyurellus, 66, 69.  
 Bathyurus, 13, 67, 68, 69, 71.  
 Batissa, 420.  
 Batocrinus, 363, 364, 365.  
 Beachia, 206, 208, 227, 241.  
 Belemnitella, 434.  
 Belinurus, 414, 415.  
 Bellerophon, 48, 162, 308, 310, 311, 313, 317, 398, 399.  
 Berenicea, 102.  
 Beyrichia, 176, 177, 338.  
 Billingsella, 2, 5, 28, 39.  
 Bilobites, 116, 133, 143.  
 Bolbocephalus, 68, 69.  
 Bollia, 176, 177.  
 Bos, 476.  
 Bothriolepis, 348.  
 Brachiocrinus, 88.  
 Brachymetopus, 341.  
 Brachyprion, 116, 118, 125, 151.  
 Breviarca, 419.  
 Bronteus, 178.  
 Bucanella, 162, 163.  
 Bucania, 29, 48, 50, 162, 163, 171, 311.  
 Buccinofusus, 452, 455.  
 Buccinum, 426, 433, 452, 457, 470, 473.  
 Bulimella, 398, 399, 401.  
 Bulimorpha, 398, 399, 400, 407.  
 Bumastus, 178, 183.  
 Busycon, 452, 455, 470, 471.  
 Buthograptus, 14.  
 Buthotrephis, 2, 14, 76.  
  
 CACABOCRINUS, 196, 197.  
 Cactocrinus, 363, 364, 366.  
 Calapoecia, 350.  
 Calathospongia, 358, 359, 361.  
 Calaurops, 50.  
 Calceocrinus, 88, 89, 196, 197.  
 Callianassa, 434.  
 Callista, 418, 421, 462, 463.  
 Callithamnopsis, 14, 23.  
 Callocystites, 96.  
 Callonema, 310, 315, 323, 325, 403.  
 Callopora, 81, 100, 101, 103, 107, 200, 201.  
 Callotrypa, 100, 101, 111.  
 Calymene, 8, 13, 68, 69, 71, 178, 179, 338, 345.  
 Calyptraphorus, 452.  
 Camarella, 29, 30.  
 Camarium, 118, 129.  
 Camarophoria, 372.  
 Camarotoechia, 29, 30, 115, 118, 141, 205, 207, 208, 210, 235, 243, 257, 372, 383.  
 Cameroceras, 58, 61.  
 Cancellaria, 452, 470, 473.  
 Caninia, 80, 87.  
 Canis, 476.  
 Cannapora, 80.  
 Caprina, 418.  
 Caprinella, 418, 484.  
 Caprinula, 418.  
 Capulus, 50, 55, 400, 405, 426, 427. [481.  
 Cardiola, 268, 277, 297, 299, 353.  
 Cardiomorpha, 268, 275, 279, 281, 307, 352, 388, 393.  
 Cardiopsis, 268, 299, 388, 395.  
 Cardita, 418, 444, 445, 451, 464, 469.  
 Carditamera, 444, 445.  
 Cardium, 268, 301, 418, 464, 465.  
 Caricella, 426, 452.  
 Carinaropsis, 50, 55.  
 Carpinus, 438, 441.  
 Carpolithes, 438, 439.  
 Carya, 440.  
 Caryatis, 418, 444.  
 Caryocrinus, 96.  
 Caryocystites, 98, 99.  
 Cassidaria, 452.  
 Castor, 476.  
 Castoroides, 476.  
 Catenipora, 80, 85.  
 Cavolina, 470, 471.  
 Cellepora, 442.  
 Centronella, 210, 211, 243, 374.  
 Ceramopora, 100, 101, 102, 105.  
 Ceratiocaris, 176, 178, 187.  
 Ceratodictya, 190, 193.  
 Ceraurus, 68, 69, 178, 179, 180, 181, 185.  
 Cerithiopsis, 426.



- Cerithium, 426.  
 Chætetes, 16, 17, 19, 82, 85, 89, 107, 111.  
 Chætocladus, 14.  
 Chætomorpha, 14.  
 Chama, 444, 447.  
 Chariocephalus, 8, 13.  
 Chasmops, 338, 341.  
 Cheirocrinus, 88, 89, 196, 197.  
 Cheirurus, 179, 180.  
 Chemnitzia, 433.  
 Chione, 464.  
 Chonetes, 118, 119, 151, 153, 210, 211, 212, 213, 214, 215, 259, 261, 374, 375.  
 Chonopectus, 374, 375.  
 Chonophyllum, 82, 83, 194.  
 Chonostrophia, 211, 214.  
 Christiania, 118, 119, 127.  
 Chrysallida, 470, 473.  
 Cibota, 420.  
 Cimitaria, 268, 269.  
 Cinnamomum, 440.  
 Cinulia, 426.  
 Cithara, 428.  
 Cladopora, 82.  
 Clathropora, 26, 102.  
 Clathrosporgia, 190.  
 Cleidophorus, 44, 47, 156.  
 Cleiothyris, 373, 374, 387, 483.  
 Climacograptus, 18, 21, 23.  
 Clinopistha, 268, 273.  
 Clioderma, 56, 59.  
 Clisospira, 50.  
 Clitambonites, 233.  
 Closteriscus, 428, 429.  
 Clymenia, 328, 331.  
 Cochliolepis, 469, 470.  
 Codaster, 196, 370, 371.  
 Cœliocrinus, 366, 369.  
 Cœlocaulis, 101, 102, 200, 201, 203.  
 Cœlospira, 115, 120, 121, 127, 214, 215, 225.  
 Cœnites, 82, 87.  
 Cœnograptus, 18, 19, 23.  
 Coleolus, 326, 333.  
 Columbella, 452, 469, 470.  
 Columnaria, 16.  
 Colus, 452, 455.  
 Conaspis, 8, 9.  
 Conchicolites, 59, 64.  
 Conchidium, 120, 137.  
 Conocardium, 156, 157, 268, 269, 270, 271, 301, 351, 388, 481.  
 Conocephalites, 8, 9, 11, 13.  
 Conocoryphe, 8, 9.  
 Conolichas, 183, 338, 339, 343.  
 Conophyllum, 82, 83.  
 Constellaria, 18, 19.  
 Conularia, 56, 72, 170, 171, 326, 327, 406.  
 Conus, 452.  
 Corbicula, 420.  
 Corbiculopsis, 420.  
 Corbula, 420, 464, 465.  
 Cordylocrinus, 88, 95.  
 Cornulites, 171, 174, 175, 188.  
 Coronura, 339, 340, 341.  
 Corycephalus, 340, 341.  
 Corymbocrinus, 88, 95.  
 Coscinium, 200.  
 Coscinopora, 190, 201.  
 Cranæna, 214, 221, 261.  
 Crania, 30, 120, 121, 137, 214, 215.  
 Craniella, 214, 215.  
 Crassatella, 420, 421, 446, 447.  
 Crassatellites, 446, 447.  
 Crassinella, 463, 464.  
 Crenipecten, 270, 271, 285, 299, 351, 388.  
 Crepicephalus, 8, 9.  
 Crepidula, 452, 453, 470, 471.  
 Crinocystites, 95, 98.  
 Criocardium, 420.  
 Cryphæus, 340, 341.  
 Crypta, 452, 453, 470, 471.  
 Cryptodiscus, 88.  
 Cryptonella, 120, 121, 214, 215, 216, 217, 221, 261, 350, 374, 375.  
 Cryptorhytis, 428, 433, 484.  
 Cumingia, 464.  
 Cuneamya, 156, 161, 163, 188.  
 Cunearca, 445, 446.  
 Cuneocorbula, 464, 465.  
 Cupulocrinus, 24, 27, 74.  
 Cyathocrinites, 90, 93.  
 Cyathocrinus, 90, 91, 95, 196, 197, 366, 367, 371.  
 Cyathophyllum, 192.  
 Cybele, 180, 183.  
 Cyclocystoides, 26.  
 Cyclolites, 82, 83, 87.  
 Cyclonema, 50, 51, 55, 162, 165, 169, 310, 312, 323, 400, 405, 407.  
 Cyclopteris, 190, 191.  
 Cyclora, 50, 57.  
 Cyclorhina, 216, 217, 243, 261.  
 Cyclospira, 29, 30.  
 Cyphaspis, 180, 185, 340, 345.  
 Cypræa, 452.  
 Cypricardella, 270, 271, 272, 273, 289, 351, 388, 389, 390, 391, 395, 397.

- Cypricardia, 158, 159, 272, 307, 390, 391, 393.  
 Cypricardinia, 158, 161, 272, 352, 390, 391.  
 Cypricardites, 44, 45, 47, 74, 158, 272, 277, 289.  
 Cyprimeria, 420.  
 Cyrtia, 120, 121, 145, 149, 216, 217, 219, 249.  
 Cyrtina, 120, 121, 216, 217, 218.  
 Cyrtoceras, 51, 58, 59, 60, 61, 170, 171, 172, 173, 328, 329, 335.  
 Cyrtolites, 50, 51, 55, 59, 164, 309, 312, 313.  
 Cyrtonella, 312, 313.  
 Cystiphyllum, 192, 194.  
 Cythere, 410, 411.  
 Cytherea, 419, 420.  
 Cytherellina, 410.  
 Cytherina, 176, 177.  
 Cytherodon, 272, 273, 275, 299, 305, 307, 352, 390, 397, 399.  
  
 DADOXYLON, 190.  
 Dalmanella, 30, 31, 35, 120, 122, 133, 218, 231.  
 Dalmania, 68, 69, 180, 181, 339, 340, 341, 343.  
 Dalmanites, 68, 69, 71, 179, 180, 181, 185, 339, 340, 341, 343.  
 Daphnella, 428.  
 Delphinula, 454, 455, 457.  
 Delthyris, 30, 37, 122, 149, 218, 247, 249, 251, 253, 351.  
 Dendrocrinus, 24, 25, 74, 90, 91.  
 Dendrograptus, 2, 3.  
 Dentalium, 428.  
 Derbya, 374, 387, 412, 413, 483.  
 Desmograptus, 194, 195.  
 Dexiobia, 389, 392.  
 Diamesopora, 102.  
 Dicellomus, 2, 5.  
 Dichocœnia, 462, 463.  
 Dicranograptus, 19, 20, 21, 23.  
 Dictyolites, 76.  
 Dictyonema, 20, 78, 79, 85, 188, 194, 195.  
 Dictyophyton, 191, 192, 193, 358, 359, 361.  
 Dictyospongia, 358, 359.  
 Didelphys, 476.  
 Didymograptus, 20, 23.  
 Didymophyllum, 190.  
 Dielasma, 215, 374, 376, 387.  
 Dignomia, 32, 35, 122, 129, 218, 219, 227.  
 Dikelocephalus, 8, 9, 10, 11.  
 Dinictis, 458.  
 Dinobolus, 122, 133.  
 Dinocardium, 464, 465.  
 Dinorthis, 32, 35.  
 Diphyphyllum, 16, 17, 82, 83, 87.  
 Diplodonta, 464, 467.  
 Diplograptus, 20, 21, 23.  
 Diplophyllum, 82, 83.  
 Discina, 2, 122, 133, 218, 227, 231, 243, 376, 377, 444, 445.  
 Discinella, 2, 7.  
 Discinisca, 444, 445.  
 Discites, 332, 333.  
 Discoporella, 442, 443.  
 Discoria, 416.  
 Discosorus, 172, 173.  
 Dithyrocaris, 178, 187.  
 Divaricella, 446, 447, 464, 467.  
 Dizygocrinus, 365.  
 Dolabra, 483.  
 Dolatocrinus, 196, 197.  
 Dolichopterus, 184.  
 Donax, 420.  
 Dorycrinus, 363, 366, 367.  
 Dosiniopsis, 418, 421.  
 Douvillina, 218, 220, 259, 351.  
 Drillia, 428, 454, 459.  
 Drupa, 439, 440.  
 Duncanella, 82, 83, 86, 87.  
 Dystactella, 269, 272.  
  
 EATONIA, 124, 220.  
 Ecculiomphalus, 50, 51, 312, 315.  
 Echinochama, 445, 446.  
 Echinocystites, 98.  
 Echino-encrinites, 26, 27.  
 Ecphora, 453, 454.  
 Ectenocrinus, 24, 25.  
 Ectenodesma, 272, 352.  
 Ectenodictya, 360, 361.  
 Edmondia, 44, 45, 273, 274, 275, 305, 352, 391, 392, 393.  
 Edriocrinus, 90, 196.  
 Eichwaldia, 115, 124, 141.  
 Elephas, 476.  
 Eleutherocrinus, 200.  
 Elymella, 274, 289, 392, 395.  
 Enallopora, 17, 26.  
 Encope, 442.  
 Encrinurus, 68, 69, 181, 182.  
 Endoceras, 59, 60, 61, 65, 75.  
 Endoptygma, 428.  
 Endothyra, 358, 359.  
 Ensis, 446, 451, 464, 465.  
 Entomis, 338.  
 Entomocaris, 178.  
 Eodon, 271, 273.  
 Eotrochus, 400, 405, 407.  
 Equus, 476, 477.



Eretmocrinus, 363, 366.  
 Eriphyla, 420.  
 Ervilia, 464, 467.  
 Escharopora, 28, 29, 102, 109.  
 Eucalyptocrinus, 90, 92, 93.  
 Eulima, 470.  
 Eumetria, 376, 381.  
 Eunella, 215, 217, 220, 261.  
 Eunema, 164.  
 Euomphalus, 4, 52, 164, 165, 169,  
 312, 313, 314, 315, 325, 400,  
 402, 414, 415.  
 Eupachyrcinus, 366, 369.  
 Eupleura, 453, 454, 470, 471.  
 Euproöps, 414, 415.  
 Eurypterus, 185, 186, 414, 415.  
 Eurytellina, 464, 469.  
 Euthydesma, 265, 269, 274, 352.  
 Eutrochocrinus, 365.  
 Euvola, 446, 447.

FAGUS, 440.  
 Fasciolaria, 454.  
 Favistella, 82, 85.  
 Favites, 462, 463.  
 Favosites, 16, 17, 82, 83, 84, 85,  
 89, 194, 360, 361, 362, 363.  
 Fenestella, 101, 102, 104, 107,  
 109, 111, 113, 200, 372, 373,  
 482.  
 Fiber, 476.  
 Ficus, 416.  
 Filicites, 190, 191.  
 Fissurella, 470, 471.  
 Fissuridea, 470, 471.  
 Fistulipora, 200, 203.  
 Forbesiocrinus, 196, 199, 366, 369.  
 Fossularca, 463, 464.  
 Fucoïdes, 2, 3, 76, 77.  
 Fulgur, 453, 454, 470, 471.  
 Fusispira, 52, 55.  
 Fusus, 427, 428, 429, 433, 453,  
 454, 470.

GALEODEA, 454.  
 Gastrochæna, 420.  
 Gennæocrinus, 196, 197.  
 Gervillia, 420.  
 Gilbertsocrinus, 196, 366, 367,  
 369, 371.  
 Gladius, 429, 484.  
 Globiconcha, 428.  
 Glossina, 227.  
 Glossites, 274, 289, 392, 395.  
 Glycymeris, 446, 449, 451, 464,  
 467.  
 Glyptaster, 92.  
 Glyptocardia, 269, 276.

Glyptocrinus, 24, 27, 92, 93.  
 Glyptodesma, 263, 276, 352.  
 Gomphoceras, 60, 172, 173, 328,  
 329.  
 Gomphocystites, 98.  
 Goniatites, 327, 328, 329, 330,  
 331, 332, 333, 406, 407, 408,  
 409.  
 Gonioceras, 60.  
 Goniocoelia, 220, 233.  
 Goniophora, 44, 45, 273, 276, 277,  
 305, 352, 392, 396, 397.  
 Gorgonia, 16, 27, 79, 84.  
 Gosseletia, 278, 293, 303, 352.  
 Grammysia, 269, 278, 279, 280,  
 281, 299, 352, 392, 393.  
 Granoarca, 445, 446.  
 Graphiocrinus, 366, 369.  
 Graptolithus, 2, 3, 19, 21, 22, 23,  
 78, 80, 81, 188.  
 Gryphæa, 420.  
 Gryphæostrea, 422.  
 Guaia, 474, 475.  
 Guia, 474.  
 Gypidula, 220, 221, 235.  
 Gyroceras, 327, 332, 408.  
 Gyrodes, 428.

HALYSITES, 81, 84, 350.  
 Hamites, 434, 435.  
 Haplocrinus, 198.  
 Harlania, 76, 77.  
 Harpes, 68, 69.  
 Hebertella, 32, 33, 35.  
 Helicoceras, 434, 435, 484.  
 Helicotoma, 52.  
 Heliolites, 84, 86, 350.  
 Heliophyllum, 193, 194.  
 Helix, 454.  
 Helopora, 104.  
 Hemicosmites, 98.  
 Hemicystites, 26, 27, 98.  
 Hemimactra, 446, 449.  
 Hemipronites, 32, 37.  
 Hemitrypa, 104, 107.  
 Hernodia, 200.  
 Heterocrinus, 24, 25.  
 Heteropora, 442.  
 Hipparionyx, 222, 231, 257, 259.  
 Holocystites, 98, 99.  
 Holopea, 52, 55, 57, 164, 165,  
 316, 402, 403.  
 Holoptychius, 348, 349.  
 Homalonotus, 182, 342, 343.  
 Homocrinus, 91, 92, 101, 198.  
 Homocystites, 26, 27.  
 Homœospira, 124, 125, 139, 141.  
 Hornera, 104, 109.

Hydnoceras, 192, 193.  
 Hydrochœrus, 476.  
 Hyolithellus, 3, 6, 7.  
 Hyolithes, 6, 7.  
 Hypanthocrinites, 91, 92.  
 Hypothyris, 379, 381.

ICHNOPHYCUS, 78.  
 Ichthyocrinus, 91, 92, 368.  
 Ichthyodorulite, 179, 186.  
 Icthyorhachis, 104.  
 Ilionia, 157, 158, 159.  
 Illænurus, 10.  
 Illænus, 68, 69, 70, 71, 179, 182, 183.  
 Illicium, 440.  
 Ilyanassa, 471, 472.  
 Inachus, 62, 63.  
 Inocaulis, 80, 81.  
 Inoceramus, 422, 423.  
 Iocrinus, 24, 25.  
 Ischyriza, 474.  
 Isis, 86, 111.  
 Isochilina, 66, 67, 338.  
 Isonema, 311, 314, 317.  
 Isotelus, 67, 70.

JANIRA, 446, 447, 449.

LABIOSA, 464, 469.  
 Lævicardium, 464.  
 Lampterocrinus, 89, 92.  
 Lapeirousia, 424.  
 Lecanocrinus, 91, 92, 94.  
 Leda, 263, 280, 281, 392, 393, 395, 397, 412, 413, 446, 449, 466, 467, 469.  
 Leguminosites, 440.  
 Leiopteria; 158, 159, 265, 280, 282, 283.  
 Leiorhynchus, 205, 222, 227.  
 Lepadocrinus, 98.  
 Leperditia, 176, 338, 339, 410, 411.  
 Lepetopsis, 402.  
 Lepidechinus, 372.  
 Lepidodendron, 190, 191, 358.  
 Lepidodiscus, 26.  
 Leptæna, 32, 37, 39, 41, 113, 117, 119, 124, 125, 126, 127, 135, 137, 151, 188, 222, 224, 259, 261.  
 Leptænisca, 125, 126, 127.  
 Leptobolus, 32.  
 Leptocœlia, 117, 121, 126, 215, 224, 225.  
 Leptodesma, 157, 158, 265, 282, 283, 284, 291.

Leptodomus, 158, 159, 279, 281, 393.  
 Leptomaria, 454.  
 Leptophlœum, 190.  
 Leptostrophia, 126, 127, 128, 129, 149, 151, 224, 226, 259, 261, 350.  
 Lichas, 70, 71, 179, 182, 184, 185, 339, 342, 347.  
 Lichenalia, 103, 104, 106, 111, 133, 200.  
 Lichenocrinus, 26.  
 Lima, 267, 271, 284, 285, 422.  
 Limaria, 83, 86.  
 Limoptera, 284, 285, 352.  
 Lingula, 2, 3, 4, 5, 33, 34, 35, 77, 123, 128, 129, 219, 226, 227, 376, 416.  
 Lingulella, 3, 4, 226, 227.  
 Lingulepis, 3, 4.  
 Lingulodiscina, 219, 226, 227, 231, 377.  
 Lingulops, 34.  
 Liorhynchus, 223, 226.  
 Lissopleura, 128, 141.  
 Lithostrotion, 362.  
 Littorina, 163, 164, 454, 472.  
 Lituities, 62, 63, 172.  
 Lobocrinus, 365.  
 Loculipora, 103, 105, 106.  
 Loganograptus, 22, 23.  
 Lonchæus, 472, 473.  
 Lonchocephalus, 9, 10.  
 Lophophyllum, 362.  
 Lophospira, 52, 53, 55, 75.  
 Loxonema, 164, 165, 311, 314, 402, 403.  
 Lucina, 284, 299, 422, 446, 447, 465, 466.  
 Lunatia, 428, 429, 431.  
 Lunilites, 442, 443.  
 Lunulicardium, 284, 285, 299, 352.  
 Lycopodites, 190, 191.  
 Lyriocrinus, 94, 95.  
 Lyriopecten, 265, 286, 352.  
 Lyrodesma, 44, 47, 49.  
 Lyrodictya, 360, 361.  
 Lyropecten, 446, 449.  
 Lyropora, 482, 483.

MACLUREA, 4, 52.  
 Macoma, 466, 467.  
 Macrocheilus, 314, 316, 402, 405, 414, 415.  
 Macrodon, 286, 352, 353, 385, 392, 393.  
 Macrostylocrinus, 94.



Mactra, 422, 447, 448, 449, 466, 467.  
 Mactrotoma, 448, 449.  
 Mangitia, 430, 472, 473.  
 Margarita, 430.  
 Margaritaria, 448, 451.  
 Marginella, 472, 473.  
 Marginifera, 239, 413.  
 Mariacrinus, 89, 94, 95, 197, 199.  
 Marsupiocrinites, 95.  
 Marsupiocrinus, 94, 95.  
 Meekella, 412, 413.  
 Megalanteris, 226, 227, 241.  
 Megalodon, 481.  
 Megalomus, 158, 351.  
 Megambonia, 158, 159, 286, 287, 288, 289, 301, 353, 389, 394.  
 Meganteris, 207, 226, 227, 239, 241.  
 Megistocrinus, 198, 199, 369.  
 Megistostoma, 430.  
 Melania, 454.  
 Mellita, 442, 462.  
 Melocrinites, 95.  
 Melocrinus, 94, 95, 198.  
 Melonites, 370.  
 Membranipora, 442.  
 Mercenaria, 466, 469. [229.  
 Merista, 119, 128, 129, 131, 226,  
 Meristella, 128, 129, 130, 131, 226, 227, 228, 229, 233.  
 Meristina, 130, 131, 155.  
 Mesalia, 430.  
 Mesodesma, 465, 466.  
 Mesonacis, 10, 11.  
 Mesostoma, 454.  
 Metaplasia, 228, 229, 255.  
 Metoptoma, 4, 7, 52, 59.  
 Michelinia, 194.  
 Microceras, 54.  
 Microdiscus, 7, 10, 13.  
 Microdon, 271, 273, 288, 389, 391, 394.  
 Microdonella, 271, 273.  
 Mitra, 454, 455, 472, 475.  
 Modiella, 288, 353.  
 Modiola, 288, 289, 353, 422.  
 Modiolopsis, 44, 45, 46, 47, 49, 157, 158, 159, 160, 161, 163, 295.  
 Modiolus, 448, 449.  
 Modiomorpha, 273, 275, 283, 288, 289, 290, 291, 305, 353, 393, 394.  
 Monodonta, 430.  
 Monotrypella, 83, 88, 89, 111.  
 Monticulipora, 17, 18, 83.  
 Mosasaurus, 436.

Mulinia, 466, 467.  
 Murchisonia, 54, 75, 164, 165, 316, 317, 402, 403, 405.  
 Mya, 466.  
 Myalina, 160, 161.  
 Myelodactylus, 94.  
 Myrtillocrinus, 198.  
 Mytilarca, 160, 161, 279, 290, 292, 293, 301, 353, 354, 394, 482.  
 Mytilops, 288, 289, 353.  
 Mytilus, 395, 448, 449, 483.  
  
 NÆDYCERAS, 337.  
 Nassa, 453, 456, 471, 472.  
 Natica, 53, 54, 403, 404, 405, 427, 429, 430, 456, 472, 473.  
 Naticopsis, 315, 316, 325, 404, 405.  
 Nautilus, 62, 332, 333, 408, 414, 434, 458.  
 Neæra, 448.  
 Nerita, 430.  
 Neverita, 430, 472, 473.  
 Newberria, 228, 229, 239.  
 Nileus, 70.  
 Nodipecten, 448, 449.  
 Noëtia, 463, 466.  
 Nothozoë, 6.  
 Notogoneus, 458, 459.  
 Nucleocrinus, 200.  
 Nucleospira, 130, 133, 149, 205, 228, 230.  
 Nucula, 45, 46, 47, 49, 159, 160, 292, 293, 353, 394, 395, 412, 413, 422, 423, 427, 447, 448, 466, 467.  
 Nuculana, 281, 393, 394, 395, 412, 413, 422, 423, 448.  
 Nuculites, 45, 46, 160, 161, 292, 293, 294, 295, 353, 397.  
 Nuttainia, 342, 343.  
 Nyassa, 294, 353.  
 Nyssa, 440.

OBELISCUS, 472, 473.  
 Obolella, 3, 4, 5, 45.  
 Obolus, 5, 123, 132.  
 Odontocephalus, 341, 342.  
 Odostomia, 456, 471, 472.  
 Odostomopsis, 430.  
 Ogygia, 67, 70.  
 Oldhamia, 15, 22.  
 Olenellus, 9, 10, 11, 13, 71, 72.  
 Olenus, 9, 11, 12, 69, 70.  
 Oligoporus, 372.  
 Oligoptycha, 427, 430.  
 Oliva, 456, 457.

- Ollacrinus, 367, 368.  
 Onchus, 177, 186.  
 Oncoceras, 62, 63, 172, 173.  
 Ophileta, 54.  
 Opis, 422.  
 Orbicula, 5, 34, 35, 37, 39, 41, 59, 105, 132, 133, 137, 230, 231, 444, 445.  
 Orbiculoidea, 34, 35, 123, 132, 133, 219, 230, 231, 376, 377.  
 Ormoceras, 62, 172.  
 Orophocrinus, 370, 371.  
 Orthis, 3, 4, 31, 33, 34, 35, 37, 43, 117, 121, 123, 131, 132, 133, 135, 137, 139, 143, 188, 203, 219, 223, 230, 232, 233, 241, 243, 245, 255, 350, 376, 377, 381, 383.  
 Orthisina, 3, 4, 232.  
 Orthoceras, 61, 64, 65, 171, 172, 173, 174, 175, 327, 329, 332, 333, 334, 335, 336, 337, 408, 409.  
 Orthodesma, 46, 47, 160, 161.  
 Orthonomæa, 42, 43.  
 Orthonota, 46, 47, 157, 160, 161, 188, 294, 297, 305, 353, 394, 399.  
 Orthonychia, 316, 317, 319, 321.  
 Orthopora, 106, 111, 202.  
 Orthothetes, 125, 127, 133, 134, 149, 151, 231, 232, 233, 257, 259, 261, 376, 377, 387.  
 Orthostrophia, 132, 133, 134, 139.  
 Ostrea, 448, 449, 466, 467.  
 Ovis, 476.  
  
 PALÆARCA, 43, 45, 46.  
 Palæaster, 24, 25, 196.  
 Palæocardia, 160.  
 Palæocyclus, 83, 86.  
 Palæocystites, 25, 26.  
 Palæomanon, 78.  
 Palæoneilo, 294, 296, 309, 353, 393, 396, 397.  
 Palæophycus, 2, 3, 14, 76, 78.  
 Palæopinna, 296.  
 Palæosolen, 295, 296, 297, 298, 307, 351, 353.  
 Palæotrochus, 316, 325.  
 Paleschara, 101, 106, 107, 109.  
 Panenka, 269, 296, 351, 353.  
 Panopea, 422.  
 Paracardium, 269, 298.  
 Paracyclas, 273, 285, 298, 299, 307, 353.  
 Parastrophia, 29, 36.  
 Parazyga, 205, 232, 261.  
  
 Pastinaca, 474.  
 Pecten, 265, 267, 271, 298, 422, 425, 445, 447, 448, 449, 451, 466, 467.  
 Pectunculus, 419, 422, 447, 448, 450, 465, 466.  
 Peltura, 9, 12.  
 Pemphigaspis, 11, 12.  
 Pentagonia, 221, 229, 232, 233.  
 Pentamerella, 117, 134, 234, 235, 249.  
 Pentamerus, 113, 117, 121, 134, 136, 143, 221, 234, 235.  
 Pentremites, 200, 370, 371, 482.  
 Periechocrinus, 363, 368.  
 Perissolax, 430.  
 Perna, 424.  
 Pernopecten, 389, 396, 397.  
 Peronæa, 466, 467.  
 Peronæoderma, 465, 468.  
 Petraia, 86, 87.  
 Petricola, 468.  
 Phacops, 69, 70, 181, 184, 339, 342, 343, 344, 345.  
 Phænopora, 106, 109.  
 Phaëthonides, 344.  
 Phanerotinus, 312, 313, 314.  
 Philine, 430.  
 Phillipsia, 341, 344, 347.  
 Pholadella, 279, 298, 396, 397.  
 Pholadomya, 424, 449, 450.  
 Pholas, 450, 451, 468, 469.  
 Pholidops, 35, 36, 37, 121, 133, 136, 137, 234.  
 Pholidostrophia, 234, 259, 261.  
 Phragmoceras, 171, 174.  
 Phragmodictya, 359, 360, 361.  
 Phragmostoma, 51, 54, 55, 311, 316.  
 Phthonia, 298, 353, 354.  
 Phyllites, 416.  
 Physeter, 476.  
 Physospongia, 360, 361.  
 Phytopsis, 14.  
 Piloceras, 64.  
 Pinna, 463, 468.  
 Pinnopsis, 285, 298.  
 Pisania, 456.  
 Placenticeras, 434.  
 Placunanomia, 450.  
 Plæsiomys, 33, 35, 36, 37.  
 Plagiectenium, 449, 450.  
 Platopsis, 424.  
 Platyceras, 4, 163, 164, 166, 167, 309, 316, 317, 318, 319, 320, 321, 401, 404.  
 Platycrinus, 89, 94, 95, 198, 368, 369.



- Platynotus, 70, 71, 183, 184.  
 Platystoma, 51, 54, 101, 165, 166, 168, 169, 177, 311, 319, 322.  
 Platystrophia, 36, 136, 143.  
 Plectambonites, 33, 36, 127, 136, 151.  
 Plectorthis, 29, 35, 36, 188.  
 Pleioptygma, 455.  
 Plethomytilus, 291, 293, 300, 301, 354. [243.  
 Plethorhynchus, 234, 235, 236.  
 Pleurodictyum, 194.  
 Pleuromeris, 465, 468.  
 Pleurorhynchus, 269, 300.  
 Pleurotoma, 456, 459, 471, 472, 473.  
 Pleurotomaria, 51, 54, 55, 57, 163, 168, 169, 311, 313, 317, 322, 323, 324, 325, 401, 403, 404, 405, 406, 407, 414.  
 Pleurotrema, 430.  
 Plicatula, 424, 450, 468, 469.  
 Plumalina, 190, 191.  
 Polydilasma, 86, 87.  
 Polyphemopsis, 401, 406.  
 Polypora, 103, 105, 106, 107, 108, 109, 113, 191, 200.  
 Polytoëchia, 33, 36, 37.  
 Porambonites, 133, 136.  
 Porcellana, 472, 473.  
 Porcellia, 326, 331, 333.  
 Porites, 16, 17, 81, 86.  
 Posidonia, 157, 160.  
 Posidonomya, 160, 161, 163.  
 Potamides, 430.  
 Poteriocrinus, 24, 25, 198, 367, 368, 369.  
 Præcardium, 269, 300.  
 Primicorallina, 14.  
 Primitia, 66, 67, 338.  
 Primitiopsis, 338.  
 Prionotropis, 433, 434.  
 Prismodictya, 192, 193.  
 Procyon, 478.  
 Productella, 236, 237, 238, 239, 257, 378, 379, 381.  
 Productus, 237, 238, 239, 257, 378, 379, 380, 381, 412, 413, 484.  
 Proëtus, 70, 179, 181, 184, 344, 345, 346, 347, 410, 411.  
 Promacrus, 396, 397.  
 Proscorpius, 186.  
 Protaræa, 16, 17.  
 Protaster, 98.  
 Prothyris, 300, 354.  
 Protobalanus, 336.  
 Protocardium, 418, 450.  
 Protocatostomus, 458, 459.  
 Protorthis, 36.  
 Protozyga, 29, 36.  
 Protypus, 7, 12, 13.  
 Psammocola, 445, 450.  
 Pseudocarcinus, 474.  
 Pterinea, 45, 48, 157, 160, 161, 265, 279, 283, 287, 300, 302, 303, 309, 354.  
 Pterinopecten, 157, 161, 162, 266, 267, 302, 303, 304, 354.  
 Pterinoperna, 424, 425.  
 Pteronites, 157, 162, 263, 283, 304, 396.  
 Pteroperna, 424, 425.  
 Pterotheca, 49, 57, 58, 75.  
 Pterygotus, 186.  
 Ptilionella, 200, 201.  
 Ptilodictya, 28, 29, 103, 107, 108, 109.  
 Ptilonaster, 196.  
 Ptilopora, 372.  
 Ptychaspis, 9, 12, 13.  
 Ptychodesma, 304.  
 Ptychonema, 83, 85, 88.  
 Ptychoparia, 7, 9, 12.  
 Ptychospira, 380, 381.  
 Pugnax, 380, 383.  
 Pyrenomœus, 162.  
 Pyrifusus, 430.  
 Pyropsis, 430.  
 RACHIOPTERIS, 190.  
 Radiolites, 424.  
 Radula, 424.  
 Raëta, 465, 468.  
 Rafinesquina, 33, 36, 38, 39, 125, 136.  
 Rastrites, 22.  
 Receptaculites, 16, 17, 78, 350.  
 Rensselæria, 136, 138, 207, 209, 227, 229, 238, 240, 241.  
 Reptaria, 200, 201.  
 Reptocelleporaria, 442, 462.  
 Retepora, 28, 29, 51, 108, 109, 111.  
 Reticularia, 385.  
 Retiocrinus, 25, 26.  
 Retiolites, 80, 81.  
 Retzia, 125, 138, 377, 380, 381.  
 Rhaphistoma, 54, 55, 56, 57.  
 Rhinidictya, 103, 108, 109.  
 Rhinocantha, 456.  
 Rhinoceros, 458.  
 Rhinopora, 28, 108.  
 Rhipidomella, 133, 135, 138, 231, 233, 240, 242, 243, 377, 380, 382.

- Rhodocrinus, 94, 95, 99, 198.  
 Rhombodictyon, 16.  
 Rhynchonella, 115, 119, 125, 129, 138, 140, 141, 143, 149, 153, 155, 209, 211, 235, 237, 242, 373, 381, 382, 383, 389.  
 Rhynchospira, 125, 140, 141, 153, 155, 217, 242, 261.  
 Rhynchotrema, 29, 38.  
 Rhynchotreta, 115, 140, 141, 142, 382, 383.  
 Rhynconella, 373, 381, 383, 389.  
 Rhynobolus, 142, 143.  
 Ribeiria, 66.  
 Rissoina, 456.  
 Roemerella, 219, 242.  
 Rostellaria, 429, 432, 456.  
 Rotalia, 358, 359.  
 Rusophycus, 78.  
  
 SACCOCRINUS, 89, 96, 97.  
 Sagenella, 108, 157.  
 Sanguinolites, 159, 275, 277, 291, 295, 304, 307, 309, 354, 391, 393, 396, 399.  
 Sao, 70.  
 Sapindus, 440.  
 Sarcinula, 16, 17.  
 Sauripteris, 348, 349.  
 Sauritolepis, 348, 349.  
 Scalaria, 432, 456, 472, 473.  
 Scambula, 424.  
 Scapharca, 445, 450.  
 Scaphella, 456, 459.  
 Scaphiocrinus, 367, 368, 369.  
 Scenidium, 133, 142, 143.  
 Schizocrania, 35, 38, 41.  
 Schizocrinus, 26.  
 Schizodus, 269, 273, 299, 304, 305, 306, 307, 352, 354, 391, 396, 397, 398, 399, 483.  
 Schizophoria, 133, 142, 207, 231, 233, 244, 245, 377, 382.  
 Schizotreta, 133.  
 Scobina, 468, 469.  
 Scolithus, 6, 175, 176.  
 Scyphocrinus, 25, 26.  
 Semele, 468, 469.  
 Seminula, 373, 382, 387.  
 Serpulites, 6, 7.  
 Serripes, 418.  
 Sieberella, 135, 137, 142.  
 Sigillaria, 190, 191.  
 Skenidium, 142.  
 Solarium, 453, 456.  
 Solen, 297, 306, 447, 450.  
 Soleniscus, 414, 415.  
 Spathella, 305, 306, 395, 397, 398.  
  
 Sphærexochus, 179, 184, 185.  
 Sphærocystites, 98.  
 Sphenomya, 280, 352.  
 Sphenopteris, 190, 191.  
 Sphenothallus, 14, 72.  
 Sphenotus, 273, 305, 306, 308, 354, 397, 398.  
 Sphyrodoceras, 337.  
 Spirifer, 31, 117, 123, 131, 142, 144, 145, 146, 147, 148, 149, 153, 203, 217, 219, 229, 231, 235, 244, 246, 248, 249, 250, 251, 252, 253, 254, 255, 351, 382, 383, 384, 385, 386, 387, 412, 481.  
 Spirifera, 137, 247, 249, 251, 385, 387.  
 Spiriferina, 386, 387.  
 Spirigera, 205, 254, 375, 386.  
 Spirophyton, 190.  
 Spirorbis, 176, 410, 411.  
 Squalodon, 478.  
 Stalagmium, 424.  
 Steganocrinus, 363, 368, 369.  
 Stellipora, 18, 19.  
 Stenocisma, 256, 373.  
 Stenocrinus, 25.  
 Stenopora, 17, 18.  
 Stenoschisma, 139, 141, 148, 209, 211.  
 Stenotheca, 5, 6, 35, 58.  
 Stephanocrinus, 96.  
 Stictopora, 27, 28, 105, 108.  
 Stigmara, 190.  
 Straparollina, 56.  
 Straparollus, 168, 169, 313, 314, 315.  
 Strephona, 456, 457.  
 Strepsidura, 432.  
 Streptaster, 26.  
 Streptelasma, 16, 17, 27, 83, 86, 87, 194.  
 Streptoplasma, 16, 17.  
 Streptorhynchus, 29, 38, 39, 41, 135, 148, 153, 223, 256, 375, 377, 386, 412, 413, 483.  
 Strepula, 338.  
 Striarca, 445, 450.  
 Striatopora, 86.  
 Strigilla, 450, 451.  
 Stromatocerium, 22.  
 Stromatopora, 80.  
 Strombodes, 193, 194.  
 Strombus, 432, 472.  
 Strophalosia, 237, 239, 256, 261.  
 Stropheodonta, 113, 117, 125, 127, 129, 148, 149, 150, 151, 219, 225, 256, 257, 258, 259, 261.



Strophodonta, 113, 117, 119, 127, 129, 151, 153, 219, 221, 223, 225, 227, 235, 257, 258, 259, 261.

Strophomena, 33, 37, 38, 39, 40, 113, 119, 125, 127, 135, 137, 150, 151, 153, 188, 211, 213, 219, 221, 223, 225, 233, 235, 257, 258, 259, 260, 261.

Strophonella, 38, 41, 113, 125, 135, 149, 150, 151, 152, 153, 259, 260.

Strophostylus, 168, 169, 170, 326.  
Styliola, 326.

Subretepora, 28, 29, 108, 109.

Subulites, 56, 170.

Surcula, 456.

Sus, 478.

Syncyclonema, 423, 424.

Syntrophia, 40, 43.

Syringodendron, 358.

Syringopora, 81, 83, 86.

Syringothyris, 383, 386.

TAPIRUS, 478.

Taxocrinus, 197, 198, 367, 368.

Technocrinus, 198, 199.

Teinostoma, 456.

Teleiocrinus, 363, 370, 371.

Tellidora, 468, 469.

Tellina, 297, 308, 450, 451.

Tellinomya, 45, 47, 48, 49, 59, 157, 159, 162.

Tellinopsis, 308, 354.

Temnocheilus, 408.

Tentaculites, 58, 65, 170, 171, 175, 326, 327.

Terataspis, 339, 343, 346, 347.

Terebellum, 456, 459.

Terebra, 469, 472.

Terebratella, 416.

Terebratula, 215, 217, 221, 260, 350, 375, 377, 383, 386, 416.

Terebratulina, 416.

Testudo, 474.

Thaleops, 69, 70.

Thallistigma, 201, 202.

Thamniscus, 87, 105, 109, 110.

Thamnodictya, 359, 360, 361.

Thamnograptus, 22.

Theca, 6, 7.

Thovana, 450, 451.

Thysanocrinus, 96.

Titanotherium, 460.

Tornatella, 432, 453, 456.

Tornatina, 472, 475.

Trachypora, 111, 194.

Trachytriton, 427, 429, 432.

Trapezium, 424.

Tremanotus, 163, 170.

Trematella, 111.

Trematis, 35, 39, 40.

Trematoceras, 336.

Trematocrinus, 367, 370.

Trematopora, 17, 18, 83, 89, 101, 107, 110, 111, 112, 201, 202.

Trematospira, 141, 147, 152, 153, 217, 233, 260.

Triarthrella, 14, 15.

Triarthrus, 14, 15, 69, 70.

Trichiurus, 474.

Tricœlocrinus, 370, 371.

Trigeria, 115, 205, 243, 260.

Trigonarca, 419, 426, 427.

Trinucleus, 70, 343.

Triplecia, 29, 40, 41, 42, 43.

Triplesia, 42.

Tritonidea, 471, 472.

Trochoceras, 174, 336, 337.

Trocholites, 64.

Trochonema, 55, 56, 170.

Trochus, 317, 432.

Troostocrinus, 371.

Tryblidium, 56.

Tubulostium, 432.

Turbo, 51, 53, 56.

Turbonilla, 432, 433, 474, 475.

Turrilites, 434.

Turris, 455, 458.

Turritella, 456, 458.

Tylostoma, 428, 432.

UNCINULINA, 155.

Uncinulus, 139, 141, 152, 154, 155.

Ungulina, 308.

Unitrypa, 105, 107, 112.

Uphantænia, 360, 361.

VASOCRINUS, 367, 370, 371.

Veleda, 426.

Venericardia, 445, 450.

Veniella, 426.

Venus, 450, 467, 468.

Vermipora, 86.

Vertagus, 432.

Vertumnia, 303, 308, 351.

Vitulina, 260, 262.

Voluta, 453, 457, 458.

Volutilithes, 458.

Volutoderma, 432.

Volutomitra, 473, 474.

Volutomorpha, 432.

Volva, 474.

Volvaria, 473, 474.

WAAGENIA, 37.  
Waldheimia, 141, 154.  
Whitfieldella, 81, 115, 131, 154.  
Whitfieldia, 115.  
Wilsonia, 141, 154, 383, 388.  
XENOPHORA, 458.  
Xiphias, 474.

YOLDIA, 423, 426, 467, 468.

ZAPHRENTIS, 81, 86, 87, 194, 362,  
482.  
Zeacrinus, 370.  
Zygospira, 29, 35, 42.



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